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COMPUTATIONAL FLUID DYNAMICS (CFD) ANALYSIS OF A C-135 AIRCRAFT WITH A SIDE-MOUNTED SPLITTER PLATE (with comparison to wind tunnel data)

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| mounted spiliter plate at a                         | ne request of the data of    | llested from the                   | analysis was provided to the                |
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| Test wing to augment win                            | d tuillier tests and to pr   | roviue mauring air                 | ast program in which a                      |
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|   |                              | ire coemcient dat                  | ta were tabulated for use in a              |
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## **Foreword**

The subject analysis was performed by Mr Howard Emsley and Mr Ken Wurtzler of the Flight Dynamics Directorate, Wright Laboratory (WL/FIMC) at the request of the Airborne Laser (ABL) SPO at Phillips Lab, Kirtland AFB. Capt John Wissler of the ABL SPO served as the directing authority for this support effort and Dr James Van Kuren provided direction as the resident consultant for the ABL SPO. This analysis was performed to support a planned ABL flight test in which a large splitter plate configuration will be mounted on the side of a C-135 aircraft.

## Acknowledgements

This work was performed with the cooperation of personnel from the Airborne Laser (ABL) SPO at Kirtland AFB, the 4950TW at Wright-Patterson AFB, and Dr James Van Kuren who is serving as an ABL SPO consultant. A special thanks goes to members of Wright Laboratory (WL/FIMC) for their code developing efforts which provided the tools necessary to perform this analysis.

All wind tunnel data used in this report comes from tests conducted at the Trisonic Gasdynamics Facility, Wright Laboratory (WL/FIME) in April 1993. This data was made available by Dr Van Kuren, for comparison with the numerical results.

#### **Nomenclature**

Alpha Angle of Attack

AOA Angle of Attack

Beta Sideslip Angle

CD Coefficient of Drag

CFD Computational Fluid Dynamics

CL Coefficient of Lift

CMpitch Pitching Moment Coefficient

CMyaw Yawing Moment Coefficient

CMroll Rolling Moment Coefficient

Cp Coefficient of Pressure

CPU Central Processing Unit

CY Coefficient of Yaw

deg Degrees (angular)

FIMC Computational Fluid Dynamics Branch, Aeromechanics Division,

Flight Dynamics Directorate

KEAS Knots Equivalent Air Speed

mxx Moment about the X-Axis

myy Moment about the Y-Axis

mzz Moment about the Z-Axis

px Pressure in the X Direction

py Pressure in the Y Direction

pz Pressure in the Z Direction

q Dynamic Pressure

Ve Velocity

WL Wright Laboratory

## 1. Introduction

The splitter plate/optical window configuration (see Figure 1) was designed to provide an environment where optical testing can be performed without the interference of the turbulent boundary layer created by the aircraft's fuselage. The pylon, which is mounted on the side of the aircraft, places the splitter plate at least 12 inches away from the fuselage and outside the fuselage boundary layer. By mounting the splitter plate in this fashion, the optical testing will only have to contend with a regenerated thin boundary layer that starts at the front of the plate.

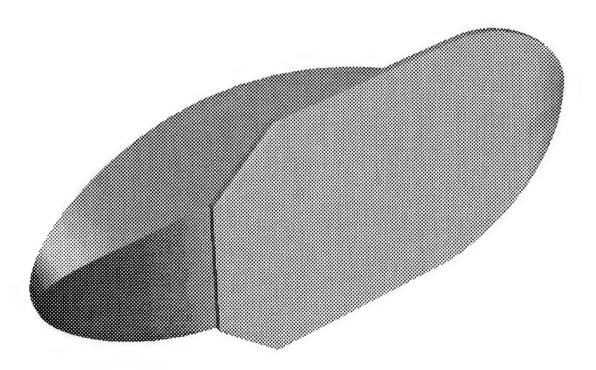


Figure 1: Splitter Plate and Pylon

Concern over the flight characteristics of the modified aircraft as well as concerns about structural loading prompted wind tunnel and Computational Fluid Dynamics (CFD) work to be performed by WL/FIME and WL/FIMC respectively. Structural analysis of the configuration is being performed by the 4950TW/AMDA with pressure data provided by the CFD analysis.

Some results from the wind tunnel testing will be presented in this report, however, complete results are found in Reference 1. For results from the structural analysis, the reader is directed to Mr Kelly Kennedy, 4950TW/AMDA.

The splitter plate/pylon design, geometric measurements of the splitter plate, and its mounting location on the aircraft were provided to WL/FIMC by Dr Jim Van Kuren and Capt Wissler. The test conditions for the CFD analysis (see Table 1) were provided to WL/FIMC by Mr C. E. Cook of 4950TW/AMDA on 1 March 1993 and were confirmed by the ABL SPO in early March.

Table 1: Flight Conditions

| Test Pt. | Altitude | Airspeed | Mach No. | AOA   | Sideslip | CL**  |
|----------|----------|----------|----------|-------|----------|-------|
|          | (feet)   | (KEAS)   |          | (deg) | (deg)    |       |
| 1        | 23,800   | 393      | 0.95     | 1.4   | 4.1      | 0.21  |
| 2        | 23,800   | 393      | 0.95     | 5.5   | 4.1      | 0.525 |
| 3        | 0        | 240      | 0.36     | 14.6  | 14.5     | 1.16  |
| 4        | 45,000   | 189      | 0.76     | 3.0   | 0.0      | 0.58  |

\*\*Note: the CL values provided in this table are for a complete
C-135 in trim. The analyses performed do not include
nacelle/pylon contributions and do not include the effects
of rudder, elevator, or flap deflections.

It was explained to WL/FIMC that concern over changes in the flight characteristics of the modified aircraft was the main reason a CFD analysis was requested. Therefore, it was proposed that the total aircraft be modeled (with and without the splitter plate) and analyzed at the four test

points. By proceeding in this fashion, incremental effects of adding the plate/pylon configuration could be determined. For this report the C-135 aircraft without the splitter plate is called the "clean" configuration, and the C-135 aircraft with the plate and pylon mounted on the right side of the fuselage is called the "dirty" configuration.

#### 2. Geometric Issues

From previous work for the 4950TW, WL/FIMC had a suitable model of a C-135 wing/body/tail configuration without engine pylons and nacelles. For the dirty case, the plate/pylon geometry was created with a local CAD/CAM system and added to the existing C-135 geometry. A small support strut which is located under the front of the plate for structural strength was omitted from this analysis due to the increased geometric complications that it would introduce and the minor aerodynamic effects it would produce.

For the dirty configuration, the plate/pylon (location provided by Capt John Wissler) was added to the geometry with the front of the elliptical pylon located at fuselage station 405.35 inches. Based on the provided dimensions, the center of the test window is located at fuselage station 460 inches (see Figure 2). The location of the plate/pylon was driven by aircraft modification limitations.

For this analysis, the pylon was placed with zero angle of attack relative to the fuselage of the aircraft. The minimum distance between the plate and the fuselage was specified as 12 inches by Dr Van Kuren and occurs between the lower half of the plate and the fuselage approximately one quarter of the distance aft from the front of the pylon. The very front of the plate which is dipped towards the fuselage is just under 13 inches away from the fuselage.

For the calculation of the coefficients, the following reference areas, moment reference lengths, and moment reference points were provided by the 4950TW/AMDA:

Wing Reference Area = 700700 sq in

Moment x = 1570.00 in Moment x = 846.64 in Reference y = 241.88 in Reference y = 0.00 in Lengths z = 1570.00 in Point z = 200.00 in

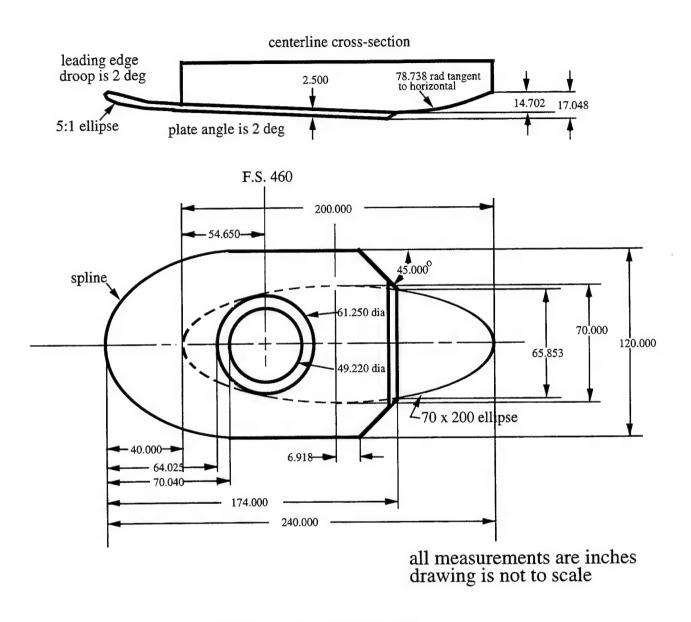


Figure 2: Splitter Plate and Pylon Dimensions

The coordinate system orientation and the positive moment directions are shown below in the figure below.

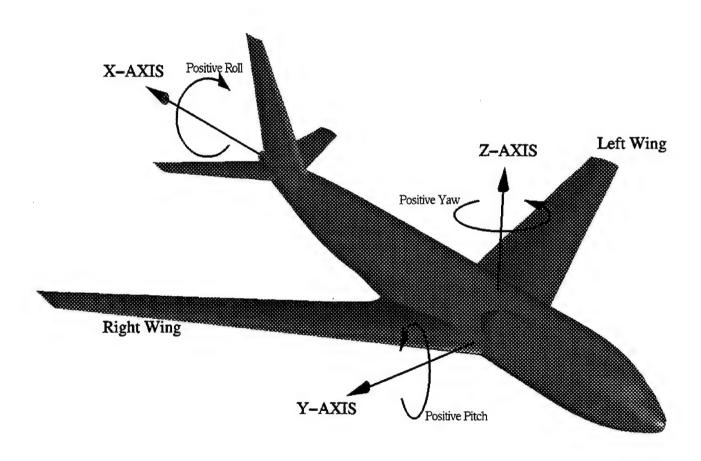


Figure 3: Coordinate System Orientation

## 3. Grid Generation

With the use of in-house grid generation tools (I3G/VIRGO and PLUTO) [2,3], separate computational grids were generated for each configuration (clean and dirty). The grid for the clean configuration consisted of 22 computational blocks with a total of 1,366,720 grid points and the dirty configuration consisted of 33 computational blocks with a total of 1,379,250 grid points. Differences in the size and the number of blocks in each grid is a direct result of geometric complications added by the plate and pylon.

#### 4. Flow Solver

The flow solver used for this analysis, MERCURY, is an in-house Euler code that was developed by Mr William Strang of WL/FIMC [4]. Over the past six years, this code has proven to be very fast, robust, and accurate in calculating flows like those occurring in this analysis. MERCURY is an inviscid flow solver and therefore cannot model the boundary layer that is a concern for this program. It can, however, provide conservative loading information, capture shocks that may occur, and indicate the paths of particles and vortices. This is not a claim that an inviscid solver provides exact measurements in highly viscous regions. Yet, from past experience this solver has produced load information that has proven to be conservative in regions where viscous flows exist. With this in mind, the flight conditions provided for test point #3 contain an extreme beta condition that can produce significant separation on the leeward side of the aircraft. The results in this case should be viewed qualitatively, especially for the dirty configuration where significant separation is expected to occur on the outboard side of the plate. For additional information on the code specifics, the reader is directed to AFWAL-TM-88-217, "MERCURY User's Manual."

Viscous solvers, such as the TEAM and GASP codes, were considered for this problem, but the time constraints and the computational resources available did not allow an analysis of this magnitude.

## 5. Flow Conditions and Computation Time

For this report, a total of nine flow solution "cases" (five clean cases and four dirty cases) have been run. The Kirtland Cray II was used to calculate the solutions with each case requiring approximately 35 MW of internal memory. On average, 6000 iterations per solution were needed to reach acceptable levels of solution convergence (density residual reduced by 4 orders of magnitude). Each clean case took 28 seconds per iteration while each dirty case took 29 seconds/iteration. This translates into 168,000 seconds per solution (46.67 CPU hours) for each clean case and 174,000 seconds per solution (48.33 CPU hours) for each dirty case. The flow conditions for each case are based on the conditions provided by the 4950TW with several modifications. For the clean cases the actual conditions used are found in Table 2, and for the dirty cases the conditions used are found in Table 3.

Table 2: Clean Case Test Conditions

| Mach Number | Angle of Attack (Alpha) | Sideslip Angle (Beta) |
|-------------|-------------------------|-----------------------|
|             |                         |                       |
| 0.95        | 5.5 <b>deg</b>          | -4.1 deg              |
| 0.95        | 1.4 deg                 | -4.1 deg              |
| 0.87        | 1.4 deg                 | -4.1 deg              |
| 0.36        | 14.6 deg                | -14.5 deg             |
| 0.76        | 3.0 deg                 | 0.0 deg               |

Table 3: Dirty Case Test Conditions

| Mach Number | Angle of Attack (Alpha) | Sideslip Angle (Beta) |
|-------------|-------------------------|-----------------------|
|             |                         |                       |
| 0.95        | 5.5 deg                 | -4.1 deg              |
| 0.87        | 1.4 deg                 | -4.1 deg              |
| 0.36        | , 14.6 deg              | -14.5 deg             |
| 0.76        | 3.0 deg                 | 0.0 deg               |

A negative sideslip angle was used as a direct result of the beta of most concern to the 4950TW. For the clean configuration, the direction the aircraft is sideslipped is not critical due to the symmetry of the aircraft, but for the dirty configuration this direction is crucial.

In the MERCURY flow solver, a negative beta implies that the nose of the aircraft yaws to the right (see Figure 3). Therefore, the decision to use negative beta conditions places the plate on the leeward side of the aircraft in yawed cases. This decision was made due to loading and aerodynamic concerns which were expected to be more significant than those for positive beta conditions. By changing signs of the results for the clean cases, it is possible to use the values for direct comparison with the dirty cases.

In addition to the change of beta, a change in Mach number from 0.95 to 0.87 was made for the dirty cases and led to an additional run of a clean case for direct comparison. This decision was made to add a flight condition clearly within the envelope as compared to those on the margin. With the plate and pylon mounted on the aircraft, it is unlikely that the aircraft will be flown at the outer limits of its Mach envelope. This change was made with the concurrence of Capt Wissler.

#### 6. CFD Results

Results from this analysis are presented in a variety of forms in the following sections.

## 6.1 Tables of Coefficients

Coefficients of Lift (CL), Drag (CD), Yaw (CY), as well as Moment Coefficients for Pitch (CMpitch), Yaw (CMyaw), and Roll (CMroll) were created for the clean and dirty solutions (Tables 4 and 5). In addition, incremental coefficient changes (Table 6) were calculated for the three cases where a direct comparison of flow conditions was possible.

The tabulated results show that the presence of the plate/pylon reduces the CL for moderate angles of attack. Although the pylon produces some lift, its influence on the right wing creates a net loss. In turn, the reduced lift on the right wing of the aircraft and the increased lift on the pylon appears to add to the nose up pitching moment and increases the negative rolling moment. In addition, the changed flow on the right wing leads to an increased positive yawing moment. By changing the downwash from the right wing, the airflow on the right side of the vertical tail is accelerated and produces additional yaw.

Results from the Mach 0.36 case illustrate a more complex flow field, and should be viewed in a qualitative manner. The severe angles of attack and sideslip produce massive separation on the left wing and the right side of the vertical tail and produces a wake off of the plate which follows the trailing edge of the wing (see Figure 11). The tabulated data shows a small increase in CL while CD increases significantly. It is important to remember that optical data will not be taken at this flight condition. Therefore, interest in this condition is purely for control and structural purposes.

Table 4: Coefficients for the Clean C-135

| MACH | ALPHA | BETA  | CL     | CD       | CY      | ${\tt CMpitch}$ | $\mathtt{CMyaw}$ | CMroll    | AXIS |
|------|-------|-------|--------|----------|---------|-----------------|------------------|-----------|------|
|      | (deg) | (deg) |        |          |         |                 |                  |           |      |
| 0.95 | 5.5   | -4.1  | 0.4723 | 0.09357  | 0.02082 | -0.25269        | 0.008940         | 0.020049  | W    |
|      |       |       | 0.4723 | 0.09184  | 0.02746 | -0.25348        | 0.008940         | 0.001931  | . S  |
|      |       |       | 0.4790 | 0.04615  | 0.02746 | -0.25348        | 0.008714         | 0.002779  | В    |
|      |       |       |        |          |         |                 |                  |           |      |
| 0.95 | 1.4   | -4.1  | 0.2831 | 0.04953  | 0.02575 | -0.17381        | 0.009773         | -0.016108 | W    |
|      |       |       | 0.2831 | 0.04757  | 0.02922 | -0.17451        | 0.009773         | -0.003639 | S    |
|      |       |       | 0.2841 | 0.04064  | 0.02922 | -0.17451        | 0.009681         | -0.003877 | В    |
|      |       |       |        |          |         |                 |                  |           |      |
| 0.87 | 1.4   | -4.1  | 0.3168 | 0.03357  | 0.03083 | -0.10977        | 0.011409         | -0.016773 | W    |
|      |       |       | 0.3168 | 0.03128  | 0.03315 | -0.11069        | 0.011409         | -0.008882 | S    |
|      |       |       | 0.3175 | 0.02353  | 0.03315 | -0.11069        | 0.011189         | -0.009158 | В    |
|      |       |       |        |          |         |                 |                  |           |      |
| 0.36 | 14.6  | -14.5 | 0.5239 | 0.12461  | 0.01152 | -0.20866        | 0.010332         | 0.071486  | W    |
|      |       |       | 0.5239 | 0.11776  | 0.04236 | -0.21991        | 0.010332         | 0.016965  | S    |
|      |       |       | 0.5366 | -0.01810 | 0.04236 | -0.21991        | 0.005722         | 0.019022  | В    |
|      |       |       |        |          |         |                 |                  |           |      |
| 0.76 | 3.0   | 0.0   | 0.3486 | 0.02182  | 0.00000 | -0.10001        | 0.000000         | 0.000000  | W    |
|      |       |       | 0.3486 | 0.02182  | 0.00000 | -0.10001        | 0.000000         | 0.000000  | S    |
| ,    |       |       | 0.3492 | 0.00355  | 0.00000 | -0.10001        | 0.000000         | 0.000000  | В    |

(Axis Systems: W = Wind, S = Stability, B = Body)

NOTE: For this analysis, a negative beta indicates the nose sideslips toward the right wing.

Table 5: Coefficients for the C-135 with Splitter Plate and Pylon

| MACH | ALPHA | BETA  | CL     | CD       | CY      | $\mathtt{CMpitch}$ | $\mathtt{CMyaw}$ | CMroll    | AXIS |
|------|-------|-------|--------|----------|---------|--------------------|------------------|-----------|------|
|      | (deg) | (deg) |        |          |         |                    |                  |           |      |
| 0.87 | 5.5   | -4.1  | 0.4856 | 0.07605  | 0.03039 | -0.14908           | 0.014029         | -0.020329 | W    |
|      |       |       | 0.4856 | 0.07368  | 0.03575 | -0.15015           | 0.014029         | -0.009618 | 8 S  |
|      |       |       | 0.4904 | 0.02680  | 0.03575 | -0.15015           | 0.013042         | -0.010919 | В    |
|      |       |       |        |          |         |                    |                  |           |      |
| 0.87 | 1.4   | -4.1  | 0.3071 | 0.03356  | 0.03214 | -0.10517           | 0.012059         | -0.016904 | ł W  |
|      |       |       | 0.3071 | 0.03118  | 0.03446 | -0.10611           | 0.012059         | -0.009341 | l S  |
|      |       |       | 0.3078 | 0.02367  | 0.03446 | -0.10611           | 0.011827         | -0.009633 | 3 B  |
|      |       |       |        |          |         |                    |                  |           |      |
| 0.36 | 14.6  | -14.5 | 0.5246 | 0.13415  | 0.04090 | -0.21835           | 0.024171         | -0.072048 | 3 W  |
|      |       |       | 0.5246 | 0.11964  | 0.07318 | -0.22944           | 0.024171         | -0.015082 | 2 S  |
|      |       |       | 0.5378 | -0.01647 | 0.07318 | -0.22944           | 0.019588         | -0.020688 | 3 B  |
|      | •     |       |        |          |         |                    |                  |           |      |
| 0.76 | 3.0   | 0.0   | 0.3377 | 0.02318  | 0.00207 | -0.08511           | 0.002170         | -0.001423 | 3 W  |
|      |       |       | 0.3377 | 0.02318  | 0.00207 | -0.08511           | 0.002170         | -0.001423 | 8 S  |
|      |       |       | 0.3384 | 0.00548  | 0.00207 | -0.08511           | 0.002093         | -0.001534 | 1 B  |
|      |       |       |        |          |         |                    |                  |           |      |

(Axis Systems: W = Wind, S = Stability, B = Body)

NOTE: For this analysis, a negative beta indicates the nose sideslips toward the right wing. The plate is on the leeward side of the aircraft for all dirty cases.

Table 6: Incremental Coefficient Changes

# INCREMENTAL COEFFICIENT CHANGES BETWEEN CLEAN AND DIRTY CONFIGURATIONS DIRTY RESULTS MINUS CLEAN RESULTS (WIND-AXIS ONLY)

|      |       |       | (delta) | (delta)  | (delta) | (delta)         | (delta)          | (delta)   |
|------|-------|-------|---------|----------|---------|-----------------|------------------|-----------|
| MACH | ALPHA | BETA  | CL      | CD       | CY      | ${\tt CMpitch}$ | $\mathtt{CMyaw}$ | CMroll    |
|      | (deg) | (deg) | )       |          |         |                 |                  |           |
| 0.87 | 1.4   | -4.1  | -0.0097 | -0.00001 | 0.00131 | 0.00460         | 0.000650         | -0.000131 |
|      |       |       |         |          |         |                 |                  |           |
| 0.36 | 14.6  | -14.5 | 0.0007  | 0.00954  | 0.02938 | -0.00969        | 0.013839         | -0.000562 |
|      |       |       |         |          |         |                 |                  |           |
| 0.76 | 2 0   | 0.0   | -0.0100 | 0.00136  | 0.00207 | 0.01490         | 0.002170         | -0.001423 |

## 6.2 Particle Trace Plots for Clean Aircraft

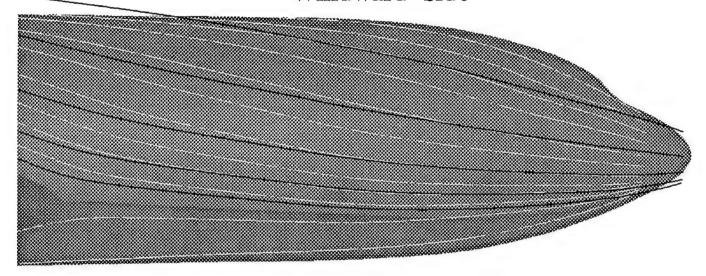
The particle trace plots for the clean cases are shown in Figures 4 - 8. The plots are provided to illustrate the angle of the air flow for a cross-section of the cases run.

The particle traces on the clean configuration shown in the following figures are plotted on and off the fuselage surface. The white streamlines are on the surface and the black streamlines are started approximately 1 foot off the surface (roughly the height of the pylon).

The plots show that the flow angularity is greater on the surface than off the surface in all cases. In general, the flow angle is approximately equal to the angle of attack (alpha) in the region where the plate will be attached, but it increases significantly as the flow approaches the wing.

These plots are only a sampling of the plots that were viewed by the investigators. The additional plots viewed were consistent with the trends demonstrated in those selected.

# Windward Side



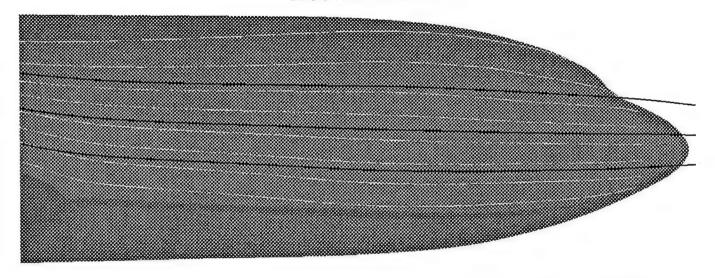
White Streamlines: on surface Black Streamlines: above surface

Mach # = 0.95Alpha = 5.1 deg Beta = 4.1 deg

Figure 4: C-135 with Velocity Vectors on Surface (Windward Side)

(Mach=0.95, Alpha=5.5 deg, Beta=4.1 deg)

# Leeward Side



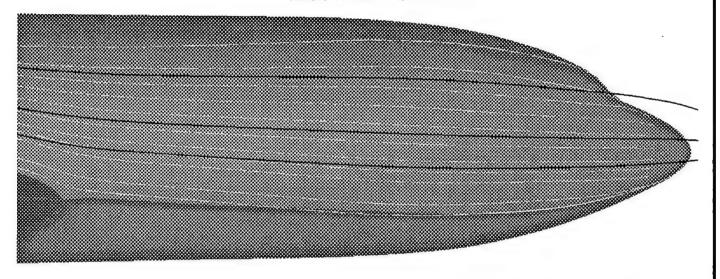
White Streamlines: on surface Black Streamlines: above surface

Mach # = 0.95Alpha = 1.4 deg Beta = -4.1 deg

Figure 5: C-135 with Velocity Vectors on Surface (Leeward Side)

(Mach=0.95, Alpha=1.4 deg, Beta=-4.1 deg)

## Leeward Side



White Streamlines: on surface Black Streamlines: above surface

Mach # = 0.87Alpha = 1.4 deg Beta = -4.1 deg

Figure 6: C-135 with Velocity Vectors on Surface (Leeward Side) (Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg)

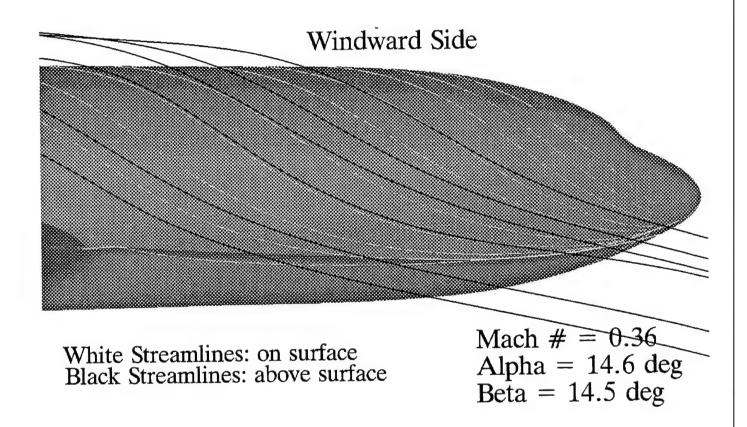
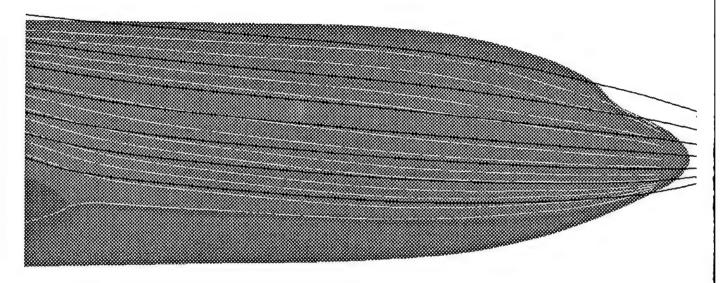


Figure 7: C-135 with Velocity Vectors on Surface (Leeward Side)

(Mach=0.36, Alpha=14.6 deg, Beta=14.5 deg)



White Streamlines: on surface Black Streamlines: off surface

 $\begin{array}{ll} \text{Mach} &= 0.76 \\ \text{Alpha} &= 3.0 \text{ deg} \\ \text{Beta} &= 0.0 \text{ deg} \end{array}$ 

Figure 8: C-135 with Velocity Vectors on Surface (Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

## 6.3 Particle Trace Plots for Dirty Aircraft

The Particle trace plots shown over the dirty aircraft in Figures 9 - 12 illustrate how the plate/pylon affects the flow over the aircraft. These plots should be used in conjunction with the pictures described in Section 6.4 to gain a better understanding of the air flow.

The particle traces shown in the following figures are plotted on the dirty aircraft in the region around the plate/pylon. The particles were released just upstream of the plate/pylon at a variety of heights and locations in an attempt to view the flow disturbance produced by the modification. Figures 9,10 and 12 show that the dirty flow produced by the plate/pylon swirls a little as it goes around the pylon and then passes under the horizontal stabilizer due to the downwash produced by the wing.

Figure 11 shows the particle traces which occur at severe angles of attack and sideslip. It appears that the flow wraps around the nose and fuselage without severe separation occuring on the plate. A vortical wake is produced off the trailing edge of the plate which passes outboard of the horizontal tail. Part of this wake also follows along the trailing edge of the wing. The lack of separated flow on the plate was initially surprising due to the amount of separated flow which appears on the leeward side of the vertical tail (see Figure 20). Two possible reasons for this lack of separation are the flow angle in the plate's proximity is significantly straightened by the presence of the fuselage, and/or the Euler formulation of the code did not capture the viscous effects which may cause separation.

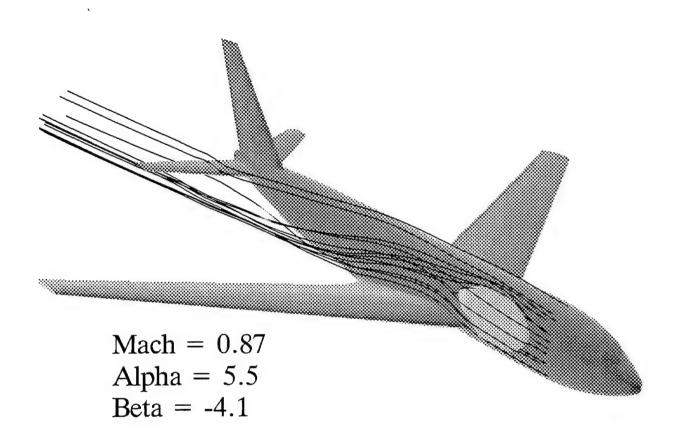


Figure 9: C-135 with Splitter Plate (Particle Traces)

(Mach=0.87, Alpha=5.5 deg, Beta=-4.1 deg)

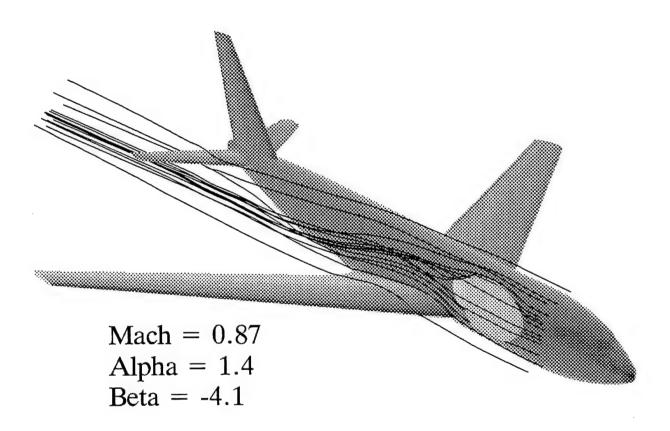


Figure 10: C-135 with Splitter Plate (Particle Traces)

(Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg)

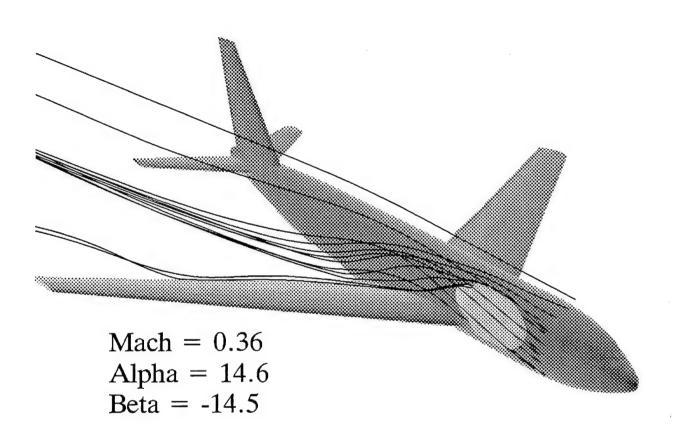


Figure 11: C-135 with Splitter Plate (Particle Traces)

(Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg)

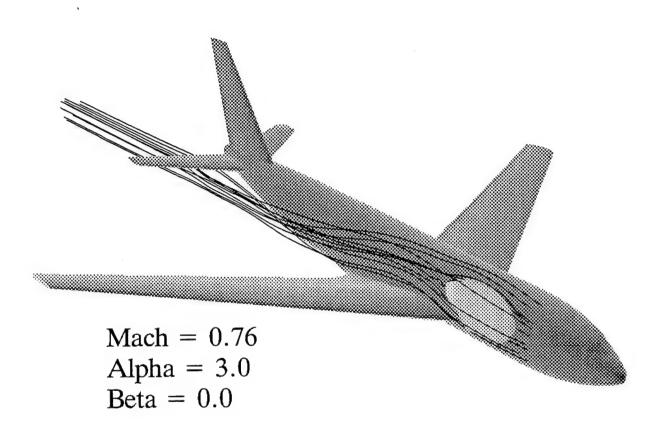


Figure 12: C-135 with Splitter Plate (Particle Traces)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

### 6.4 Mach Number Contour Plot on the Dirty Aircraft

The Mach number contour plots of the dirty configuration (Figures 13 - 23) illustrate the effects of mounting the plate/pylon. Note: the Mach number range differs on each plot to maximize the flow differentiation for each case.

The following plots contain two views of each dirty configuration run, and one view of the clean configuration where the flight conditions match. These plots should be used in conjunction with the previous particle trace plots to get a full picture of the flowfield. When viewing the contour plots the reader is reminded that for inviscid solutions of this type, peak Mach numbers tend to be higher with shocks occurring further aft.

#### 6.4.1 Mach=0.87, Alpha=5.5 deg, Beta=-4.1 deg

The first pair of plots, Figures 13 and 14, show the Mach=0.87, Alpha=5.5 degrees, Beta=-4.1 degrees case. On these plots, one sees uneven shocks on the wings and the accelerated flow on the leeward side of the vertical tail. Both of these conditions are attributed to the presence of sideslip. Also visible is the acceleration that occurs on the plate where the front begins to droop and on the top of the elliptical pylon. The stagnation that occurs on the pylon just aft of the plate indicates a very thin layer of stagnant flow that is present due to the blunt trailing edge of the plate. The wing aft of the plate/pylon shows lower Mach numbers near the root which leads to the reduced lift and increased rolling moment that the aircraft experiences at these flight conditions.

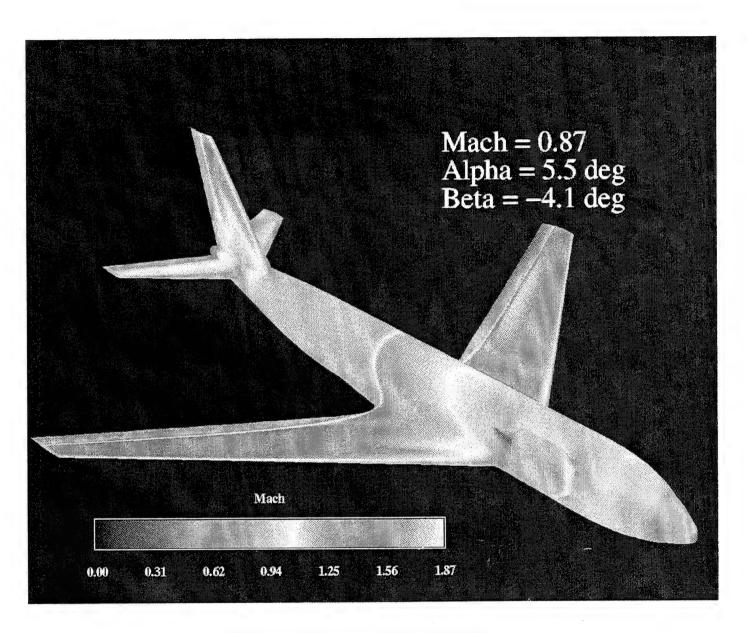


Figure 13: Dirty C-135 (Mach Contours)

(Mach=0.87, Alpha=5.5 deg, Beta=-4.1 deg)

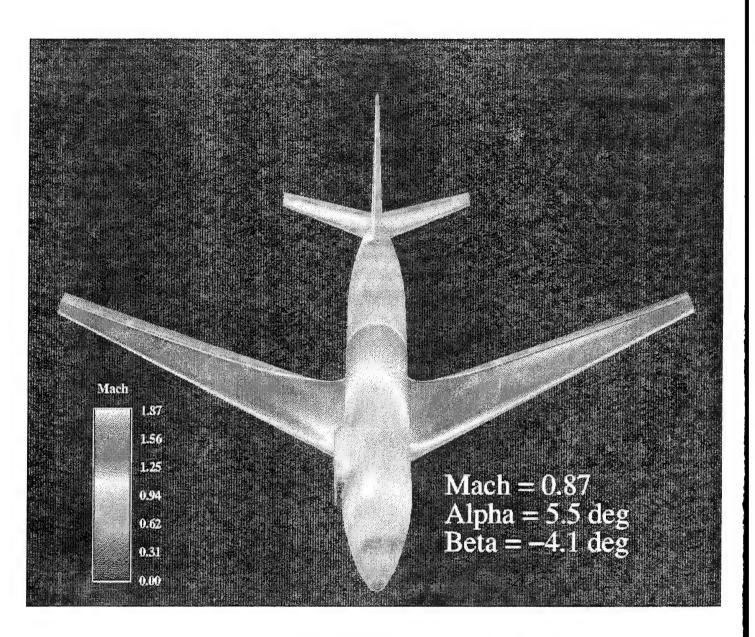


Figure 14: Dirty C-135 (Mach Contours, top view)

(Mach=0.87, Alpha=5.5 deg, Beta=-4.1 deg)

### 6.4.2 Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg

The next set of three plots, Figures 15-17, show the clean and dirty Mach=0.87, Alpha=1.4 degrees, Beta=-4.1 degrees cases. Comparison of Figures 15 and 16 illustrates the differences between the clean and dirty cases from a view above and forward of the aircraft.

The windward side of the aircraft and regions aft of the trailing edges experience negligible differences between the clean and dirty cases. The effect of the pylon in the dirty case includes increased Mach numbers on the top of the fuselage and reduced Mach numbers at the root of the leeward wing.

Figure 17 shows the side view where the top of the plate is visible. This view shows that the flow over the optical window region has a uniform Mach number. Additionally a weak shock is seen where the plate droops and a stagnation region is located aft of the plate's trailing edge.

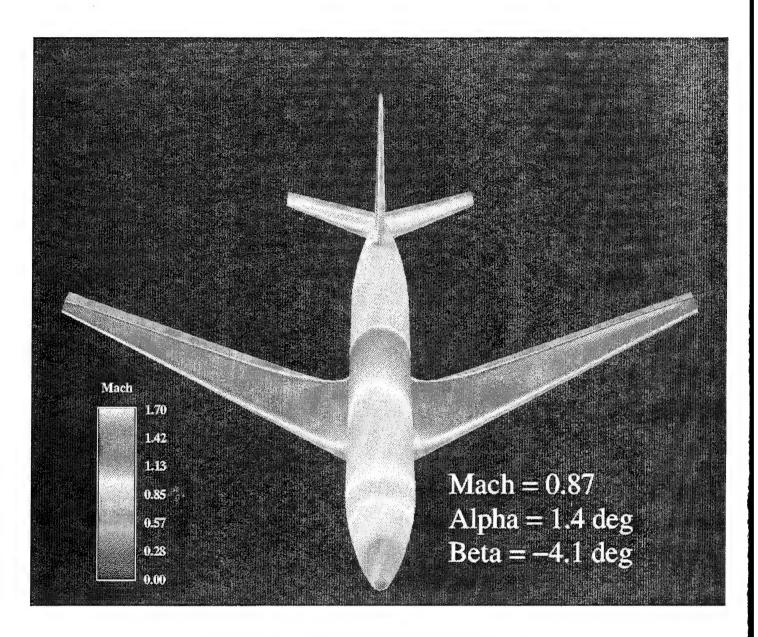


Figure 15: Clean C-135 (Mach Contours, top view)

(Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg)

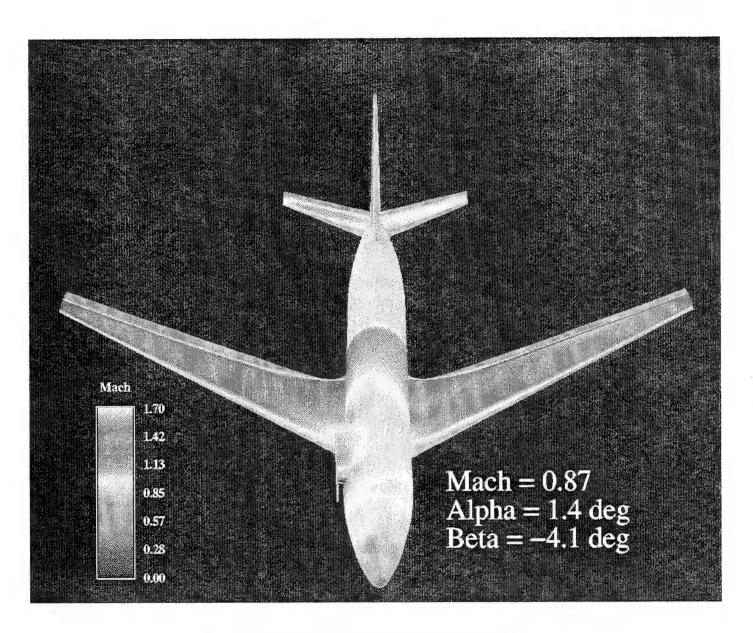


Figure 16: Dirty C-135 (Mach Contours, top view)

(Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg)

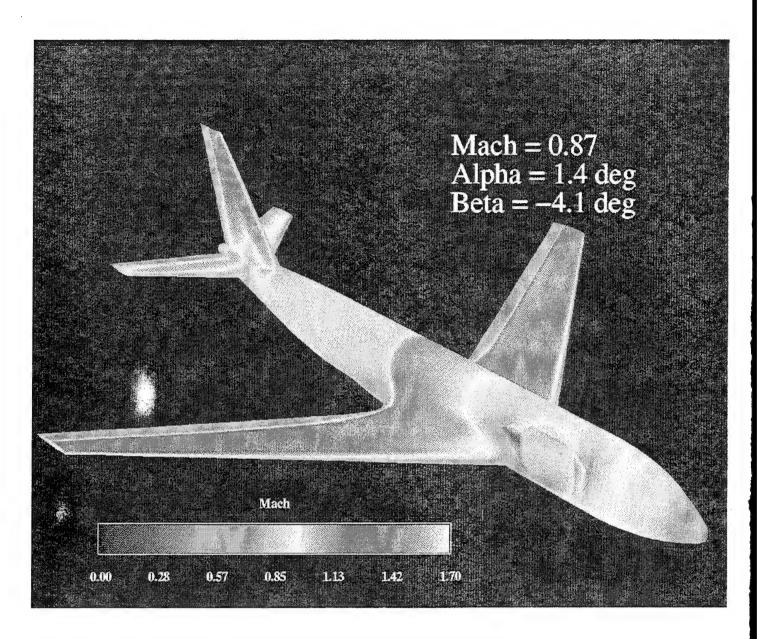


Figure 17: Dirty C-135 (Mach Contours)

(Mach=0.87, Alpha=1.4 deg, Beta=-4.1 deg)

### 6.4.3 Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg

In the next set of three plots, Figures 18-20, show the clean and dirty Mach=0.36, Alpha=14.6 degrees, Beta=-14.5 degrees cases. Comparisons of Figures 18 and 19 illustrate the differences between the clean and dirty cases from a view above and forward of the aircraft.

The windward side of the aircraft and regions aft of the trailing edges experience negligible differences between the clean and dirty cases. The effect of the pylon in the dirty case is somewhat localized in the fuselage region but extends out the leeward wing, as previously seen with the particle traces.

Figure 20 shows the side view where the top of the plate is visible. This view shows that the flow over the optical window region has a slightly nonuniform Mach number distribution. One must remember when viewing these data that optical measurements will not be taken during this severe flight condition.

Results from this flight condition should be viewed with a critical eye due to the severity of the flight conditions and the amount of separated flow that is produced.

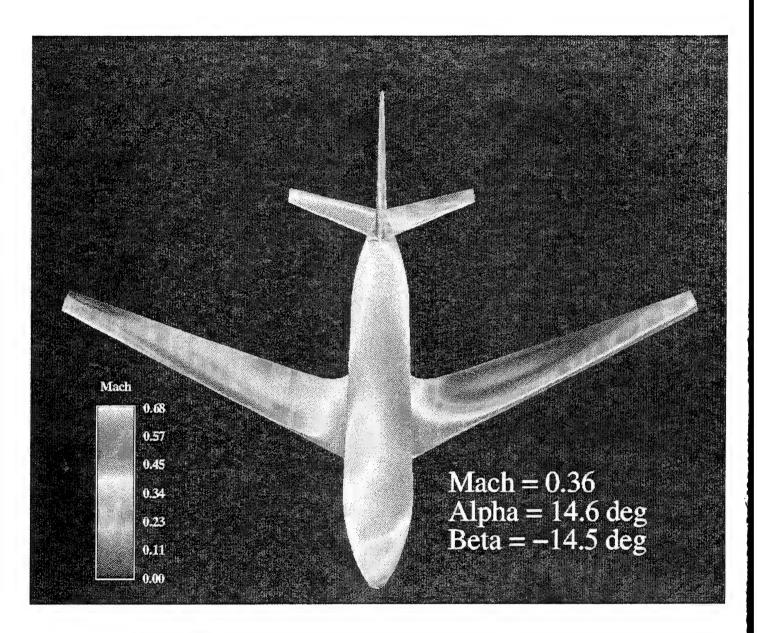


Figure 18: Clean C-135 (Mach Contours, top view)

(Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg)

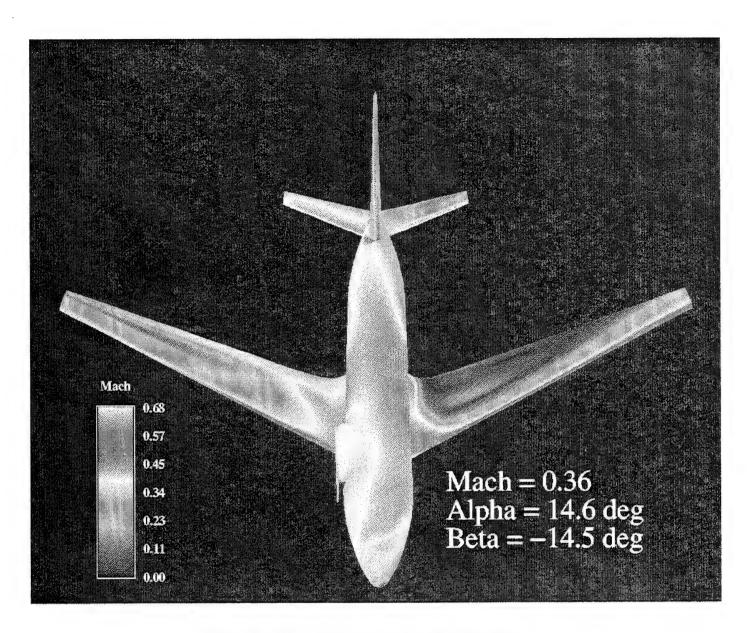


Figure 19: Dirty C-135 (Mach Contours, top view)

(Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg)

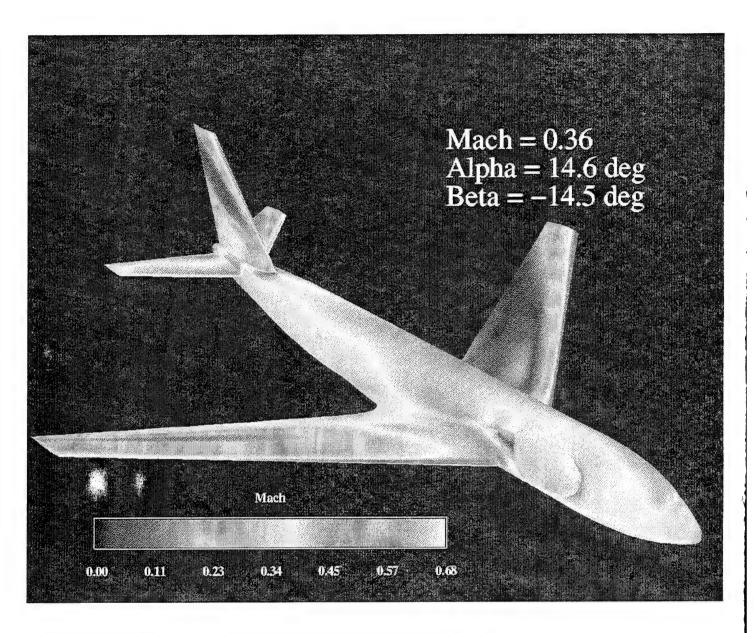


Figure 20: Dirty C-135 (Mach Contours)

(Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg)

#### 6.4.4 Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg

In the next set of three plots, Figures 21-23, show the clean and dirty Mach=0.76, Alpha=3.0 degrees, Beta=0.0 degrees cases. Comparisons Figures 21 and 22 illustrate the differences between the clean and dirty cases from a view above and forward of the aircraft.

The windward side of the aircraft and regions aft of the trailing edges experience negligible differences between the clean and dirty cases. The effect of the pylon in the dirty case includes, increased Mach numbers on the top of the fuselage, reduced Mach numbers at the root of the wing (pylon side), and localized stagnations at the front and aft of the pylon.

Figure 23 shows the side view where the top of the plate is visible. Like previous plots, this view shows that the flow over the optical window region has a uniform Mach number distribution, the flow over the plate does not reach Mach 1, and that a stagnation aft of the plate is produced. (Figure 2 shows the position of the optical window in the plate.)

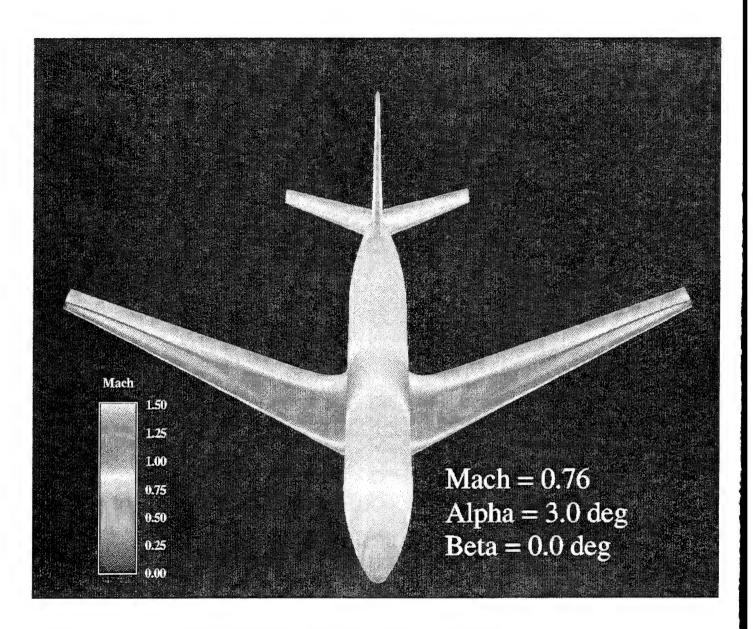


Figure 21: Clean C-135 (Mach Contours, top view)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

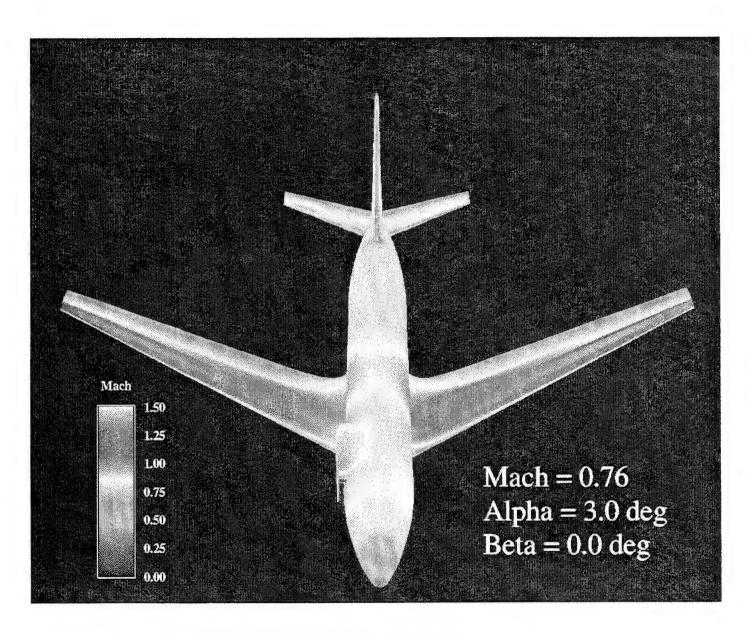


Figure 22: Dirty C-135 (Mach Contours, top view)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

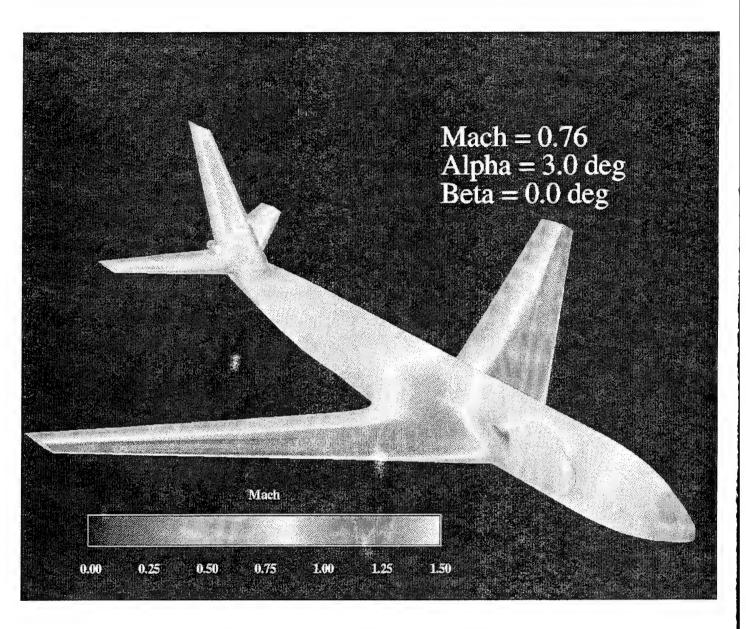


Figure 23: Dirty C-135 (Mach Contours)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

## 6.5 Pressure Coefficient Contour Plots on the Plate/Pylon

The pressure coefficient (Cp) contour plots on the plate/pylon shown in Figures 25 - 27 illustrate the aerodynamic loading. The plot for one case (Mach=0.87, Alpha=1.4, Beta==-4.1) was omitted due to its similarity to the other Mach 0.87 case. Small differences do occur, but the tabulated Cp values offer a better comparison tool than the visual plot. Note: the Cp range differs on each plot to maximize the flow differentiation for each case.

For each of the three Cp plots, the plate/pylon assembly is shown from four different view points without the aircraft. Figure 24 is included below to clarify the orientation of each view.

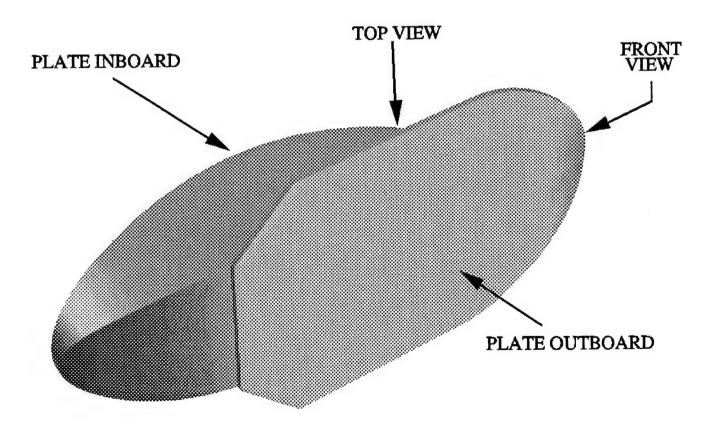


Figure 24: Splitter Plate and Pylon View Orientation

Figure 25 shows the splitter plate and pylon configuration for the Mach=0.87, Alpha=5.5 degrees, Beta=-4.1 degrees case. Flow stagnations are seen to occur on the leading edge of the plate and at the front and back of the elliptical pylon. Flow accelerations occur along the plate droop region and on the top and bottom of the pylon. These accelerated regions, indicated by the lower (more negative) Cps, are low pressure regions producing lift. A side force is produced by the combined low pressure on the outboard side of the plate and the high pressure on the inboard side. Due to the droop of the plate leading edge, the forces acting on the plate provide loads in the positive y and negative x axis directions with respect to the geometric coordinate system. As expected with an elliptical wing at angle of attack, the pressure distribution on the pylon indicates that lift is produced.

Figure 26 shows the Mach=0.36, Alpha=14.6 degrees, Beta=-14.5 degrees case. With the severity of the flight conditions, an unusual stagnation region is produced on the inboard side of the plate creating a fairly strong side force in the positive y-direction. Surprisingly, the flow on the outboard side of the plate does not appear to be separated and the distribution is uniform in the region of interest. Like the previous case the pylon acts as a lifting body at these flow conditions. It is expected that some separation would occur at this flight condition but the inviscid flow solver was unable to predict it.

Figure 27 shows the Mach=0.76, Alpha=3.0 degrees, Beta=0.0 degrees case. The Cp distribution shown in Figure 26 is very similar to the distribution shown in Figure 24. The Cp ranges of the two cases are different, however, the previous discussion holds for this case as well.

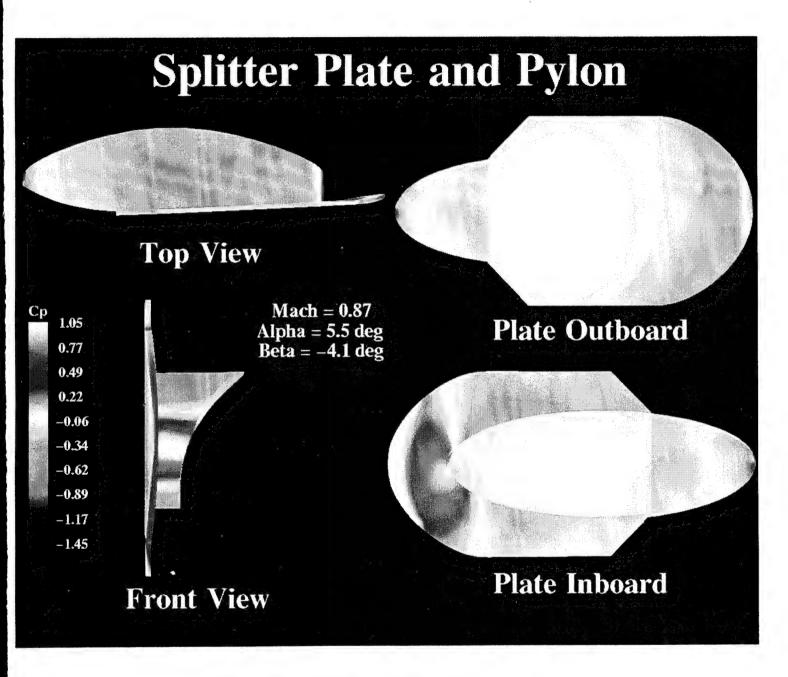


Figure 25: Splitter Plate and Pylon (Cp Contours)

(Mach=0.87, Alpha=5.5 deg, Beta=-4.1 deg)

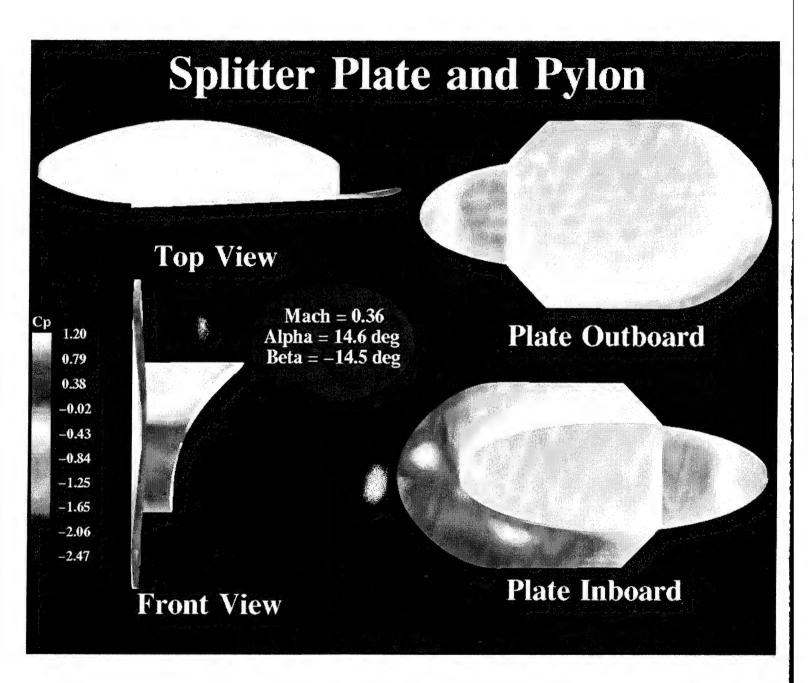


Figure 26: Splitter Plate and Pylon (Cp Contours)

(Mach=0.36, Alpha=14.6 deg, Beta=-14.5 deg)

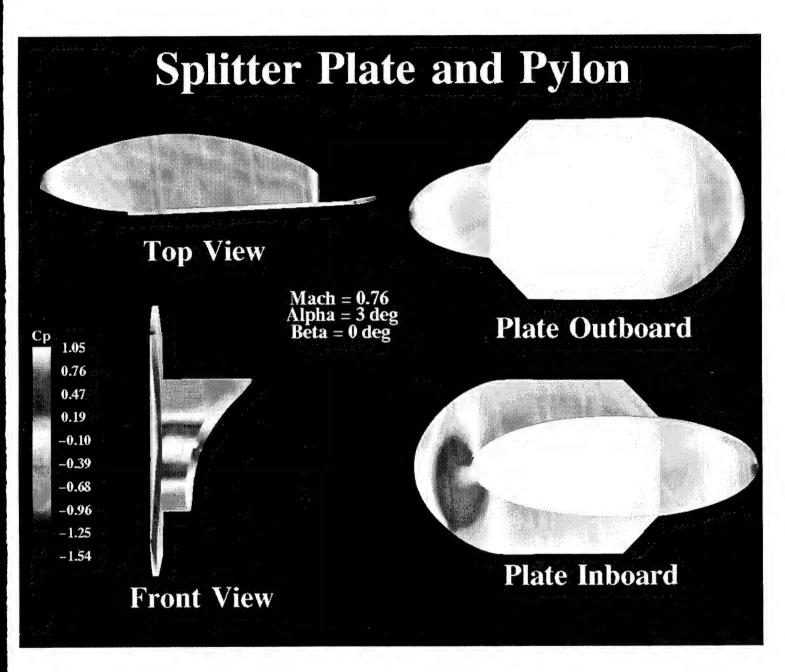


Figure 27: Splitter Plate and Pylon (Cp Contours)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

#### **6.6 PLOT3D Solution Files**

Solution files for all nine cases are available in PLOT3D format. These files can be used to extract additional information of interest. A picture only provides a snapshot of the results, while interactive viewing of the data provides a more complete insight into the results. (Interested parties should contact WL/FIMC for access to the solution files.)

### 6.7 Tabulated Cp Data on the Plate/Pylon

Tabulated Cp data on the plate/pylon for the four dirty cases is provided in the Appendix. This data was generated for conversion into loads data by the 4950TW. The table provides x, y, and z locations for each discrete panel center on the plate/pylon surfaces, the area of each panel, the unit normal components of each panel and the Cp at the centroid of each panel for the four dirty cases.

### 6.8 Cp Contour Plots on Symmetry Plane

Figures 28-29 illustrate two Cp contour plots on the symmetry plane of the clean aircraft. This data was generated for comparison with published data on the C-135 aircraft [5].

Figure 28 shows a side view of the flow at the aircraft symmetry plane for the Mach=0.76, Alpha=3.0 degree case. Visible are the stagnations at the nose, the canopy and the leading edge of the vertical tail. Also visible are the low pressure regions produced by the flow accelerating over the canopy and wing.

Figure 29 is a close-up of the nose region of the same case. The Cp range has changed to accentuate the flow features present. This plot was generated to answer some questions about positioning probes.

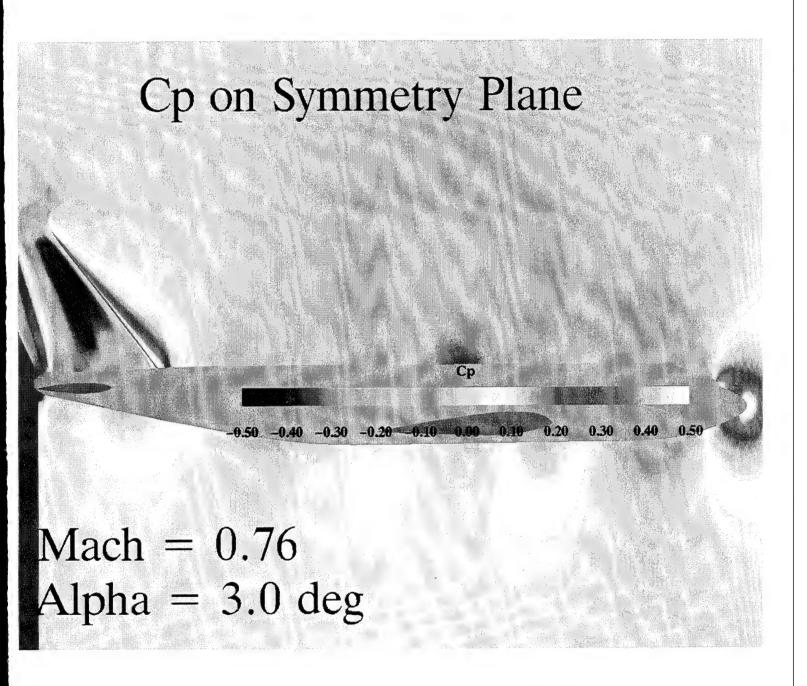


Figure 28: Cp on Symmetry Plane (Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

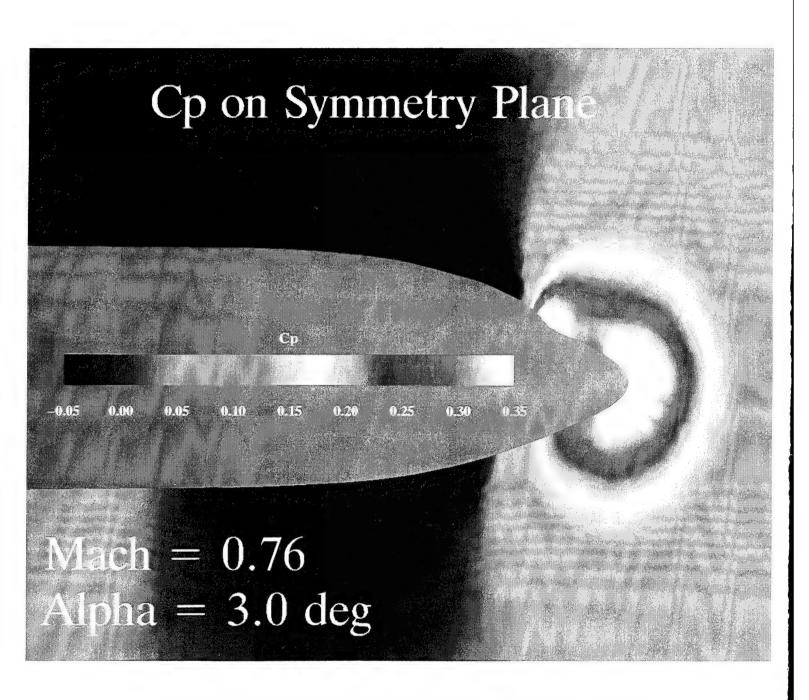


Figure 29: Cp on Symmetry Plane (Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

# 6.9 Fuselage X-station Plots

Plots of Cp vs. X-station and Mach number vs. X-station are provided along the clean configuration centerline in Figures 30 - 33. These plots provide data on both the top and bottom of the fuselage for the reader's convenience.

# Cp vs. X-station (fuselage top centerline)

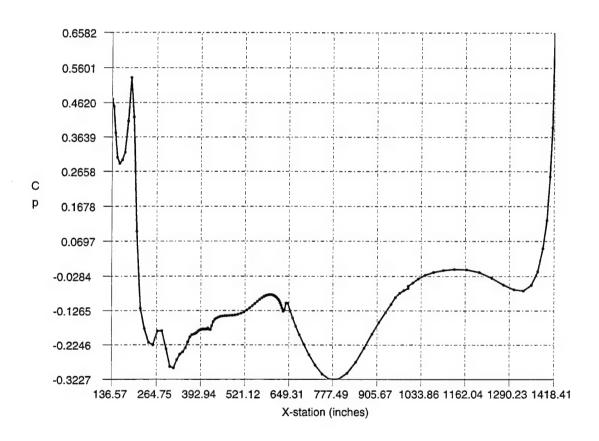


Figure 30: Cp vs. X-station (fuselage top centerline)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

# **Cp vs. X-station** (fuselage bottom centerline)

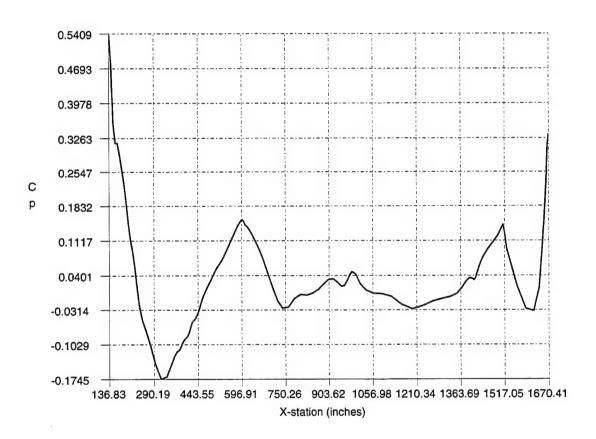


Figure 31: Cp vs. X-station (fuselage bottom centerline) (Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

## Mach Number vs. X-station (fuselage top centerline)

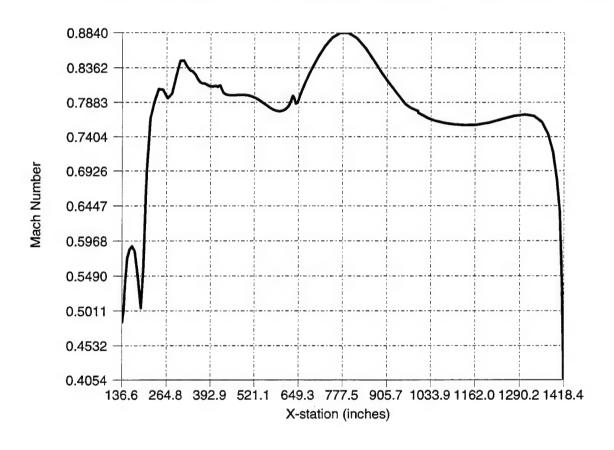


Figure 32: Mach Number vs. X-station (fuselage top centerline)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

# Mach Number vs. X-station (fuselage bottom centerline)

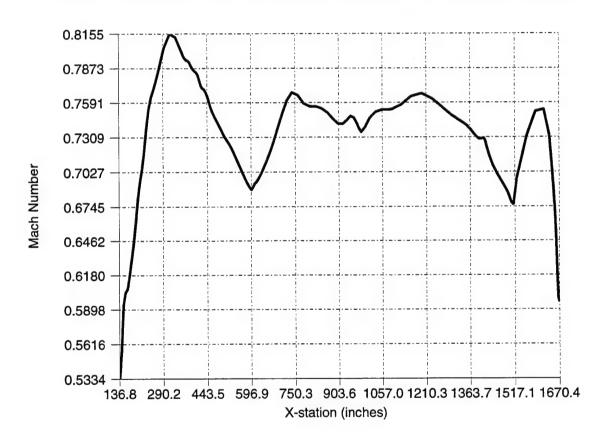


Figure 33: Mach Number vs. X-station (fuselage bottom centerline)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

## 6.10 Plate X-station Plots

Plots of Cp vs. X-station and Mach number vs. X-station are provided along the centerline of the plate for the Mach = 0.76 case. Figures 34 and 35 show wind tunnel results and are provided for comparison.

# Cp vs. X-station (plate top centerline)

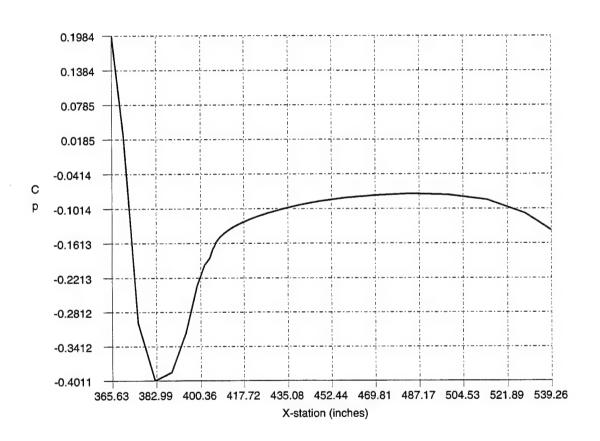


Figure 34: Cp vs. X-station (plate top centerline)

(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

# Mach Number vs. X-station (plate top centerline)

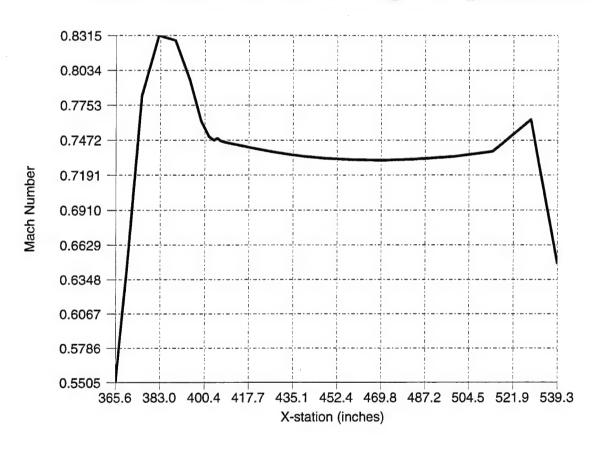


Figure 35: Mach Number vs. X-station (plate top centerline) (Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

## **6.11** Particle Trace Plot

The streamlines for the Mach = 0.76 case are plotted to illustrate the particle paths near the nose of the C-135. The position listed on the plot in Figure 36 is of interest to the ABL SPO due to an instrument probe location.

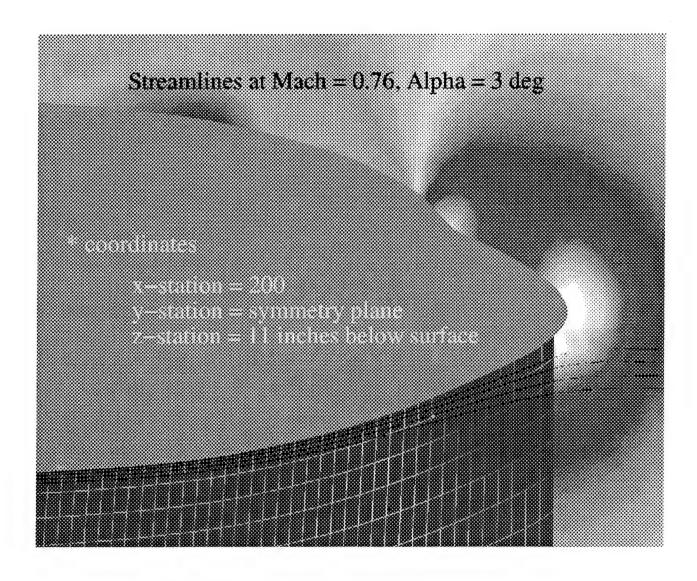


Figure 36: Streamlines under Aircraft Nose
(Mach=0.76, Alpha=3.0 deg, Beta=0.0 deg)

### 7. CFD Results Summary

The analysis provided here is very general in nature and is intended to bring several observations to light. More detailed analysis would require additional direction by the ABL SPO to focus on the specific requirements of the analysis. In general, gaining an understanding of specific areas of concern is best accomplished through discussion and interactive viewing of the data.

From the previously presented results, it is obvious that the plate/pylon have a significant effect on the air flow over the aircraft. The tabulated results show that the presence of the plate/pylon reduces the CL for moderate angles of attack. Although the pylon produces some lift, its influence on the right wing creates a net loss. In turn, the reduced lift on the right wing of the aircraft and the increased lift on the pylon appears to add to the nose up pitching moment, increases the negative rolling moment, and increases the positive yawing moment. The Mach number plots provided show reduced Mach number over the right wing and also shows that the right horizontal stabilizer is experiencing increased lift perhaps due to reduced downwash of the right wing. The flow over the plate and pylon can also be seen in the Mach number plots. These computations show that the pylon has significant transonic and low supersonic flow over most of its surface for cases where the freestream Mach number exceeds 0.76 and may experience mild shocks, especially at the 5.5 degree angle of attack case. The plate sees a local acceleration on the leading edge droop and of the plate and a weak shock forms for the higher freestream Mach number cases. This shock increases in strength as the Mach number increases but the location remains stationary. The flow over the pylon aft of the plate resembles a recirculation region. This flow region occurs only near the surface and may be due to the modelling of the plate thickness. The aft edge of the plate was purposefully left with a rearward facing step to fix the location of separation at the back of the plate.

Results from the Mach 0.36 case illustrate a more complex flow field, and should be viewed in a qualitative manner. The severe angles of attack and sideslip produce massive separation on the left wing and the right side of the vertical tail. This in turn produces a wake off of the plate which follows the trailing edge of the wing (see particle trace plot). Surprisingly, the flow on the outboard side of the plate does not appear to be separated. From the particle trace it appears that

the flow wraps around the nose and fuselage without separating. It is important to remember that optical data will not be taken at this flight condition. Therefore, interest in this condition is purely for control and structural purposes.

The Cp plots on the plate should be used in conjunction with the tabulated Cp data. The cases plotted all show a uniform Cp distribution in the region where the optical window is located. The tabulated Cp data was provided to the 4950 Test Wing to calculate loading on the plate and pylon. Results of their work are included in Section 9 of this report and in Reference 3.

## 8. Tunnel Test Comparison

In April 1993, a wind tunnel test was conducted on four plate/pylon configurations in the WL/FIME Trisonic Gasdynamics Facility. This facility is a closed circuit, variable density, continuous flow wind tunnel with an operating Mach number range of 0.23 to 3.0.

For the tests conducted, a freestream Mach number of 0.7 was used. The 0.1 scale plate/pylon models were mounted on the side wall of the 2-foot test section and were able to pivot to change the angle of attack (AoA). No sideslip cases (yaw angle not equal to zero) were possible due to the test setup. The main purpose of the wind tunnel test was to measure the boundary layer thickness in the optical window region. In addition to collecting boundary layer data, static pressure ports collected data on the splitter plate centerline, and tufts and oil flows were used for flow visualization. (For complete information on the wind tunnel test, the reader is directed to Reference 1.)

For purposes of comparison with the CFD analysis, the baseline plate tested in the tunnel is a scaled version of the geometry used for the CFD analysis. One must remember that the tunnel model is mounted on a flat wall while the CFD configuration has a plate/pylon mounted on a curved fuselage. An inspection of the CFD and tunnel pressure data shows consistently uniform flow in the optical window region, and similar trends in the data. Direct comparison of the pressure values is not included due to the differences in flight conditions and geometry. Inclusion of the wind tunnel data in this report is solely for a qualitative comparison of streamline data with the calculated results.

Courtesy of Dr.James Van Kuren, the following two pictures (Figures 37 and 38) are included for comparison with the CFD results. Figure 37 shows tufts attached to the outboard surface of the plate. These tufts show the uniformity of the flow on the plate. Figure 38 shows an oil flow at an angle of attack of 2.5 degrees. Of particular interest in this picture is the stalled region (indicated by the stationary oil) on the pylon aft of the plate. This region is caused by the bluntness of the plate's trailing edge, and is consistent with findings in the CFD results (see Figure 39).

Although the flow conditions are slightly different for Figures 38 and 39, the angles of the oil

flow on the plate are remarkably similar. The oil flow on the pylon in Figure 39 indicates that the flow is also stalled in the computational solution as mentioned above.

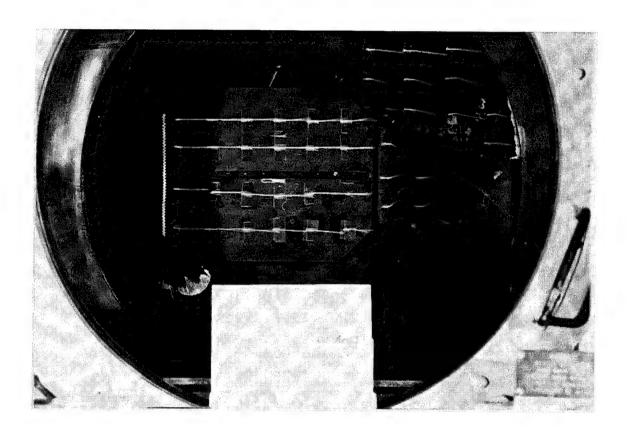


Figure 37: Tufted Splitter Plate in Tunnel

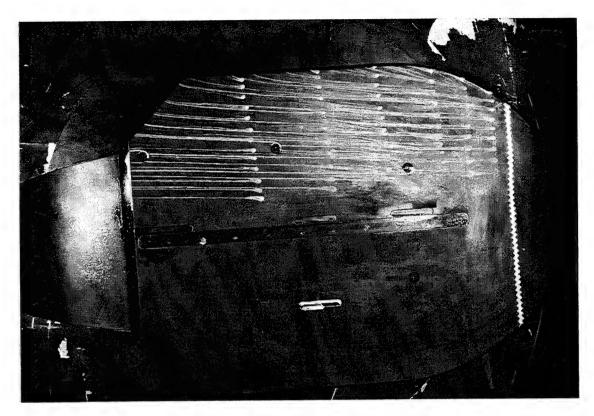


Figure 38: Splitter Plate Oil Flow in Tunnel (Mach=0.7, Alpha=2.5 deg)

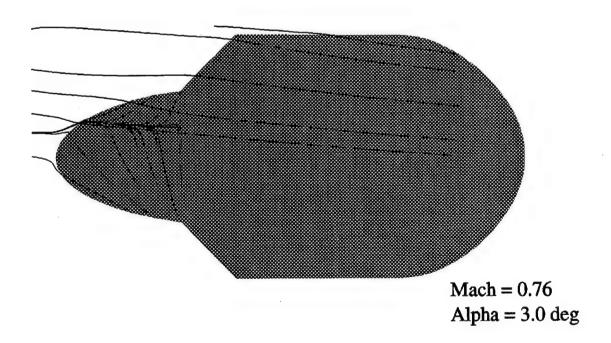


Figure 39: CFD Oil Flow on Splitter Plate

### 9. Plate and Pylon Loading

From the CFD analysis performed, pressure coefficient (Cp) data was extracted for use by the 4950 Test Wing. The Appendix contains the tabulated Cp data for the panels which make up the plate and pylon surfaces. This data was provided to the 4950 Test Wing where it was used to produce the loads and moments which act on the plate and pylon. From the Cp data, pressure loads (in lbs) were calculated on surface panels by using the definition of Cp, the area of the surface panel, and the unit normal. By summing the panels of interest, total loads and their directions were calculated. For the moment calculations, the loads were summarized around: fs 450, bl 84.5, and wl=256.

Courtesy of Mr Dave Bushroe of the 4950 Test Wing the following tables, seven thorugh eleven, have been included to complete the results.

Table 7: Test Condition Summary

| Condition | Altitude | Ve     | Mach | Beta  | Alpha | q      | q     |
|-----------|----------|--------|------|-------|-------|--------|-------|
|           | (feet)   | (KEAS) |      | (deg) | (deg) | (psf)  | (psi) |
| 1         | 23800    | 360    | 0.87 | -4.1  | 5.5   | 437.76 | 3.04  |
| 2         | 23800    | 360    | 0.87 | -4.1  | 1.4   | 437.76 | 3.04  |
| 3         | 0        | 240    | 0.36 | -14.5 | 14.6  | 191.98 | 1.33  |
| 4         | 45000    | 189    | 0.76 | 0.0   | 3.0   | 124.53 | 0.86  |

(KEAS = Knots Equivalent Airspeed, q = dynamic pressure)

In the following tables, eight through eleven, the first four surfaces represent the sides of the pylon, the next two represent the inboard plate surfaces, and the remaining surfaces represent the outboard plate surfaces and the top of the pylon.

Table 8: Pressures and Moments for Condition 1

Pressure and Moments on Plate and Pylon Surfaces
(Alt=23800 ft, Ve=360 keas, M=.87, Beta=-4.1 deg, Alpha=5.5 deg, q=3.04 psi)

| Surface | e Area    | рx     | ру      | pz     | mxx       | myy       | mzz       |
|---------|-----------|--------|---------|--------|-----------|-----------|-----------|
|         |           |        |         |        |           |           |           |
| L A Py  | 751.0     | 10.6   | 0.6     | -173.6 | 986.1     | 16122.5   | -157.2    |
| F Py B  | 2099.1    | 476.6  | 0.0     | -918.3 | 4111.6    | 43926.9   | 4146.8    |
| U A Py  | 2152.6    | 142.5  | 0.5     | 944.5  | -18460.7  | -85206.8  | 3061.0    |
| F Py U  | 5923.6    | -688.8 | 2.0     | 6469.4 | -121879.8 | -139361.0 | -11769.4  |
| Py Tot  | 10926.3   | -59.1  | 3.1     | 6322.0 | -135242.7 | -164518.4 | -4718.7   |
|         |           |        |         |        |           |           |           |
| L Pl B  | 5231.6    | -63.9  | 764.8   | 0.0    | -21792.1  | 83.8      | -160241.2 |
| U Pl B  | 5224.2    | 48.1   | -2402.5 | 0.0    | 129566.5  | 4002.9    | -89673.2  |
| Ру ТА   | Pl 3182.6 | 89.1   | 1020.4  | 0.0    | -120.5    | -131.7    | 89095.0   |
| U Pl T  | 5228.7    | -172.0 | 3110.2  | -0.2   | -99874.1  | -4651.7   | -132871.9 |
| M Pl T  | 7749.1    | -63.4  | 1814.6  | 0.0    | -3276.5   | -112.4    | 23616.6   |
| L Pl T  | 5236.0    | -207.7 | 3665.2  | 0.7    | 124729.6  | 5370.8    | -176362.0 |
| Pl Tot  | 31852.3   | -389.8 | 7972.8  | 0.6    | 119293.8  | 4561.5    | -426436.5 |
|         |           |        |         |        |           |           |           |
|         |           |        |         |        |           |           |           |
| Totals  |           | -448.9 | 7975.9  | 6322.6 | -15948.8  | -159956.9 | -431155.3 |

(All table values have been rounded to the nearest decimal place for tabulation. For surface names the following abbreviations are used: L=Lower, A=Aft, F=Forward, U=Upper, B=Bottom, T=Top, M=Middle, Py=Pylon, Pl=Plate)

Table 9: Pressures and Moments for Condition 2

Pressure and Moments on Plate and Pylon Surfaces
(Alt=23800 ft, Ve=360 keas, M=.87, Beta=-4.1 deg, Alpha=1.4 deg, q=3.04 psi)

| Surface | e Area    | px     | ру      | pz     | mxx       | myy       | mzz       |
|---------|-----------|--------|---------|--------|-----------|-----------|-----------|
| L A Py  | 751.0     | -39.5  | 0.4     | -57.7  | 150.7     | 4144.9    | -664.5    |
| F Py B  | 2099.1    | 140.4  | 0.1     | 1682.7 | 8894.7    | 26964.5   | 1983.6    |
| U A Py  | 2152.6    | 138.0  | 0.5     | 881.8  | -17411.1  | -78935.8  | 2965.6    |
| F Py U  | 5923.6    | -174.7 | 1.7     | 5899.9 | -114582.7 | -160239.7 | -5412.2   |
| Py Tot  | 10926.3   | 84.1   | 2.6     | 5041.3 | -122948.4 | -206045.5 | -1127.5   |
|         |           |        |         |        |           |           |           |
| L Pl B  | 5231.6    | -47.1  | -888.0  | 0.0    | -86105.8  | -1666.8   | -116937.4 |
| U Pl B  | 5224.2    | -5.9   | -1313.4 | 0.1    | 99029.9   | 2574.7    | -130833.4 |
| Py T A  | Pl 3182.6 | -54.6  | 161.8   | 0.0    | -321.3    | -28.3     | 3783.7    |
| U Pl T  | 5228.7    | -230.8 | 4006.2  | -0.5   | -129342.5 | -8122.9   | -181044.8 |
| M Pl T  | 7749.1    | -69.9  | 2000.9  | 0.0    | -4021.1   | -140.5    | 19696.6   |
| L Pl T  | 5236.0    | -239.7 | 4002.6  | 1.1    | 116673.1  | 5762.2    | -203232.4 |
| Pl Tot  | 31852.3   | -648.2 | 7970.1  | 0.7    | -2087.9   | 176.3     | -608565.7 |
|         |           |        |         |        |           |           |           |
|         |           |        |         |        |           |           |           |
| Totals  |           | -584.1 | 7972.7  | 5041.9 | -125036.3 | -205867.1 | -609693.2 |

(All table values have been rounded to the nearest decimal place for tabulation. For surface names the following abbreviations are used: L=Lower, A=Aft, F=Forward, U=Upper, B=Bottom, T=Top, M=Middle, Py=Pylon, Pl=Plate)

Table 10: Pressures and Moments for Condition 3

Pressure and Moments on Plate and Pylon Surfaces
(Alt=0 ft, Ve=240 keas, M=.36, Beta=-14.5 deg, Alpha=14.6 deg, q=1.33 psi)

| Surface | Area      | px     | ру      | pz     | mxx      | myy       | mzz      |
|---------|-----------|--------|---------|--------|----------|-----------|----------|
| L A Py  | 751.0     | 141.3  | 1.0     | -438.8 | 2868.8   | 43175.3   | 1238.4   |
| F Py B  | 2099.1    | 269.4  | -0.2    | -168.5 | 367.6    | 29746.9   | 1967.7   |
| U A Py  | 2152.6    | 320.4  | 0.7     | 1026.0 | -19259.9 | -100850.3 | 6002.8   |
| F Py U  | 5923.6    | -397.6 | 0.9     | 2991.6 | -56019.3 | -74356.1  | -5357.8  |
| Py Tot  | 10926.3   | 333.4  | 3.4     | 3410.3 | -72042.7 | -102284.1 | 3851.1   |
|         |           |        |         |        |          |           |          |
| L Pl B  | 5231.6    | -114.6 | 2398.1  | 0.0    | 77212.4  | 3272.0    | -97166.6 |
| U Pl B  | 5224.2    | -53.0  | -622.0  | 0.0    | 47528.9  | 524.1     | -70578.4 |
| РуТА    | Pl 3182.6 | 501.4  | 2918.7  | 0.1    | -3819.3  | 587.4     | 291952.4 |
| U Pl T  | 5228.7    | -101.5 | 1581.5  | -0.1   | -52008.6 | -2576.5   | -59949.4 |
| M Pl T  | 7749.1    | -75.0  | 2146.9  | 0.0    | 2237.3   | 78.0      | 47561.0  |
| L Pl T  | 5236.0    | -188.0 | 3392.0  | -0.4   | 129446.1 | 5634.8    | -95113.7 |
| Pl Tot  | 31852.3   | -30.7  | 11815.1 | -0.3   | 200596.7 | 7519.8    | 16705.3  |
|         |           |        |         |        |          |           |          |
|         |           |        |         |        |          |           |          |
| Totals  |           | 302.8  | 11817.5 | 3410.0 | 128554.0 | -94764.3  | 20556.3  |

(All table values have been rounded to the nearest decimal place for tabulation. For surface names the following abbreviations are used: L=Lower, A=Aft, F=Forward, U=Upper, B=Bottom, T=Top, M=Middle, Py=Pylon, Pl=Plate)

Table 11: Pressures and Moments for Condition 4

Pressure and Moments on Plate and Pylon Surfaces

(Alt=45000 ft, Ve=189 keas, M=.76, Beta=0 deg, Alpha=3 deg, q=.865 psi)

| Surface  | Area      | px     | ру     | pz     | mxx      | myy      | mzz      |
|----------|-----------|--------|--------|--------|----------|----------|----------|
| L A Py   | 751.0     | 9.3    | 0.3    | -67.7  | 401.8    | 6416.9   | 9.6      |
| F Py B   | 2099.1    | 107.6  | 0.0    | -344.8 | 1667.3   | 12592.0  | 1004.9   |
| U A Py   | 2152.6    | 72.7   | 0.2    | 372.4  | -7079.2  | -34332.9 | 1447.3   |
| F Py U   | 5923.6    | -222.0 | 0.7    | 2067.4 | -39330.3 | -46416.4 | -3732.3  |
| Py Tot   | 10926.3   | -32.5  | 1.1    | 2027.3 | -44340.5 | -61740.4 | -1270.5  |
|          |           |        |        |        |          |          |          |
| L Pl B   | 5231.6    | -6.8   | -60.2  | 0.0    | -14467.5 | -376.0   | -34105.1 |
| U Pl B   | 5224.2    | 34.0   | -956.7 | 0.0    | 45337.2  | 1640.6   | -8762.0  |
| Py T A F | 21 3182.6 | 53.1   | 424.4  | 0.0    | 39.6     | -16.7    | 39477.6  |
| U Pl T   | 5228.7    | -36.7  | 732.4  | 0.0    | -25268.1 | -1086.0  | -22039.4 |
| M Pl T   | 7749.1    | -21.8  | 625.0  | 0.0    | -1415.3  | -49.4    | 12333.8  |
| L Pl T   | 5236.0    | -45.8  | 780.5  | 0.0    | 24342.9  | 1173.9   | -35501.8 |
| Pl Tot   | 31852.3   | -24.0  | 1545.5 | 0.0    | 28568.7  | 1286.4   | -48596.8 |
|          |           |        |        |        |          |          |          |
|          |           |        |        |        |          |          |          |
| Totals   |           | -56.5  | 1546.6 | 2027.3 | -15771.8 | -60454.0 | -49867.3 |

(All table values have been rounded to the nearest decimal place for tabulation. For surface names the following abbreviations are used:

L=Lower, A=Aft, F=Forward, U=Upper, B=Bottom, T=Top, M=Middle, Py=Pylon, Pl=Plate)

## 10. References

- [1] Van Kuren, James T. "ABL AACT Splitter Plate, 0.1 Scale Wind Tunnel Test," April 1993
- [2] Emsley H. T. "I3G/VIRGO, Interactive Graphics for Geometry Generation and Visual Interactive Rapid Grid Generation, User's Manual," WL-TM-91-316.
- [3] Emsley H. T. "PLUTO 3-D Grid Generator, User's Manual," WL-TM-91-312.
- [4] Strang W. Z. "Mercury User's Manual," AFWAL-TM-88-217.
- [5] Boeing Company "External Internal Loads for the C-135 Airplane," D6-7267, April 1961.

# Appendix

(Cp data on plate and pylon surfaces)

# THIS TABULATED DATA PROVIDES THE PRESSURE COEFFICIENT DATA OF ALL PANELS ON THE PLATE AND PYLON SURFACES

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X,Y,Z : THE CENTROID COORDINATE LOCATION OF THE PANEL
AREA : THE SURFACE AREA OF THE PANEL
EX,EY,EZ: THE UNIT NORMAL COMPONENTS

CP1 : PRESSURE COEFFICIENT AT (MACH = 0.76, ALPHA = 3.0, BETA = 0.0)

CP2 : PRESSURE COEFFICIENT AT (MACH = 0.87, ALPHA = 5.5, BETA = -4.1)

CP3 : PRESSURE COEFFICIENT AT (MACH = 0.36, ALPHA = 14.6, BETA = -14.5)

CP4 : PRESSURE COEFFICIENT AT (MACH = 0.87, ALPHA = 1.4, BETA = -4.1)
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#### pylon aft lower

| 0887936017700644885848584885848858488555555560012335555555555555555555555555555555555  | 3094595636363998111646645446300366377855433338699412499824299344456688103678558355518831549417011378855255590864545956666668888097777777777777777777777777777 | 4883436613344099068195994338819659628209999999999999999999999999999999999  | 3971113841156144550066059255367575759154440964200276138881307499327272765538891574088415453059575513826764445575757575757575757575757575757575 | 56446293487832174072211973593456553343040094329903024995512039980924424812222780940986740457195583255142039995128341849571935934566577889995128341849577766177737047889151203998091203444556677889995128344855677888999518840739641870194789951283418495177879478995128341849717370478899951884974787617787947899951884974789951884974787617788999518841744961773704788999518449739641870178899951884974789617788999518849789961877889995188497899618849789961897899999999999999999999999999999 | 0.00513<br>0.00513<br>0.00513<br>0.00513<br>0.00513<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.00115<br>0.0 | 963838968832350667443288437355637755379791383246688775831935886<br>96383867832866837035563777343454775539791755387875983173556377007559759831735563770075597598317355637700757598317755377007575975983177557598317557598317557598317557598317557598317557598317557598317557598317557575983175575759831755759831755759831755759831755759831755759831755759831755759831755759831755759831755759831755759831755759831755759831755757598317557598317557598317557598317557598317557598317557598317557598317557598317557598317557598317557598317557598317557598317557575759831755759831755757575757575757575757575757575757757 | 42444494444444444444444444444444444444 | -0.0949870452926709329982934456446096333434570348583292177777777777777777777777777777777777 | 86557844311311154293047621374750003553974334699560868911198874371163330391744475836792011244588535346889313451154293047662373457533679453746995688406915683594931355991744475585638333466173427585638273477676585608883334661734276766884066118805649688215336889111988794575554443721111755554743221111755557332241133264457538684066118805649682153355979457555608883346687347767676767676767676767676767676767676 | 0.001015288566769408421188820857651311888208576514484290000000000000000000000000000000000  |
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| 583 6737<br>588 6378<br>592 44569<br>595 44163<br>597 6966<br>599 4711<br>600 8641<br>601 9404<br>602 7693<br>603 4165<br>603 4165<br>604 2198<br>604 4337<br>604 6583 | 76 8830<br>78 1621<br>76 7073<br>75 5258<br>73 7555<br>73 7555<br>72 5592<br>72 18463<br>71 36631<br>71 3660<br>71 1798                                       | 235.7667<br>238.1815<br>242.4312<br>244.43802<br>245.5702<br>245.5702<br>248.9402<br>248.9402<br>250.5163<br>251.5163<br>252.6755<br>253.7840<br>255.57669<br>256.5896 | 4.1339<br>2.8815<br>2.0822<br>1.4670<br>0.8644<br>0.7230<br>0.56230<br>0.55192<br>0.49721<br>0.4719<br>0.4640                                  | 0.4096<br>0.4757  | 0.0037<br>0.0029<br>-0.0057<br>-0.0147<br>-0.0106<br>-0.0096<br>-0.0093  | -0.9122<br>-0.8796<br>-0.8433<br>-0.8058<br>-0.7473<br>-0.7005  | -0.06311                               | -0.03705<br>-0.02649<br>-0.00755<br>0.03708<br>0.04555                                      | -0.43300   | 0.04838<br>0.05069<br>0.050806<br>0.09001<br>0.08774<br>0.11545<br>0.11742<br>0.16718<br>0.22579<br>0.27990<br>0.37512<br>0.45943<br>0.57810 |

| X<br>550.1262<br>5571.77832<br>579.47883<br>579.47887<br>590.2199<br>593.7944<br>599.600.2133<br>6001.4419<br>6001.4419<br>6002.3665<br>6003.6811<br>6004.2849<br>6004.2849<br>6004.2849<br>6004.2849<br>6004.2849<br>6004.2849<br>6004.2849<br>6004.3655<br>571.1556<br>571.1556<br>571.1556<br>571.1556<br>571.1556<br>571.1556<br>571.1558<br>579.0555<br>579.0555<br>579.0555<br>579.0555<br>579.0555<br>579.0555<br>579.0555<br>579.0555<br>589.3785<br>6004.45771<br>6004.6533<br>6004.45771<br>6004.6533<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785<br>589.3785   | 2755152286885218000288729922848115575345072233110883774655255555666666666666665555556666666666 | 2875.2265.2265.2265.2222.2222.2222.2222.22  | AR 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| 592.8748<br>595.7706<br>597.9999<br>599.7219<br>601.0620             | 70.9744<br>70.3497<br>69.9064<br>69.5950<br>69.3804                                  | 273.3217<br>271.2952<br>269.4506<br>267.7747<br>266.2526                                | 7.2008<br>5.1892<br>3.7936<br>2.8190<br>2.1466               | 0.5469<br>0.6051<br>0.6754<br>0.7233<br>0.7812           | 0.0007<br>-0.0001<br>0.0013<br>0.0012<br>0.0015                | 0.8372<br>0.7961<br>0.7375<br>0.6906<br>0.6243           | 0.00993<br>0.07564<br>0.10554<br>0.16073<br>0.15931                            | 0.02707<br>0.09572<br>0.13371<br>0.18952<br>0.19236                | -0.36630<br>-0.32655<br>-0.34351<br>-0.26884<br>-0.26168             | 0.03551<br>0.10070<br>0.13903<br>0.19683<br>0.19495                 |
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| 602.0882<br>602.8784<br>603.4916<br>603.9395<br>604.2428<br>604.4434 | 69.2474<br>69.1704<br>69.1304<br>69.1307<br>69.1699<br>69.2327                       | 264.8413<br>263.5319<br>262.3234<br>261.1956<br>260.1384<br>259.1557                    | 1.3338<br>1.3338<br>1.0747<br>0.8871<br>0.7416<br>0.6288     | 0.8386<br>0.8750<br>0.9094<br>0.9487<br>0.9730<br>0.9862 | 0.0014<br>0.0011<br>0.0006<br>0.0007<br>0.0002<br>-0.0002      | 0.5447<br>0.4842<br>0.4160<br>0.3161<br>0.2310<br>0.1657 | 0.15941<br>0.15973<br>0.10576<br>0.03625<br>0.09732<br>0.26397                 | 0.19767<br>0.21133<br>0.18003<br>0.13074<br>0.17418<br>0.30005     | -0.22284<br>-0.12728<br>-0.06798<br>-0.03365<br>0.07968<br>0.10384   | 0.18845<br>0.18279<br>0.11039<br>-0.01241<br>-0.07324<br>0.02210    |
| 604.5739<br>604.6563<br>546.5345<br>559.1154<br>569.4189<br>577.6172 | 69.3074<br>69.3871<br>84.0649<br>81.6340<br>79.2155<br>77.0638                       | 258.2458<br>257.4094<br>288.3995<br>286.0193<br>283.3744<br>280.6815<br>278.0774        | 0.5377<br>0.4589<br>29.1805<br>27.1202<br>22.4747<br>17.4008 | 0.9932<br>0.9970<br>0.1566<br>0.2203<br>0.2828<br>0.3478 | -0.0008<br>-0.0013<br>-0.0007<br>-0.0005<br>-0.0005<br>-0.0002 | 0.1161<br>0.0780<br>0.9877<br>0.9754<br>0.9592<br>0.9376 | 0.45702<br>0.54024<br>-0.23252<br>-0.23484<br>-0.20636<br>-0.16313             | 0.44976<br>0.52437<br>-0.17356<br>-0.16851<br>-0.13454<br>-0.09632 | 0.20080<br>0.01009<br>-0.30015<br>-0.35774<br>-0.35939<br>-0.35148   | 0.27297<br>0.51253<br>-0.16367<br>-0.15822<br>-0.12151<br>-0.07825  |
| 584.0144<br>588.9473<br>592.7331<br>595.6491<br>595.6372             | 75.2836<br>73.8805<br>72.7951<br>71.9678<br>71.3444<br>70.8744                       | 275.6447<br>273.4128<br>271.3878<br>269.5417<br>267.8611                                | 12.8931<br>9.3463<br>6.7435<br>4.9216<br>3.6364<br>2.7248    | 0.4130<br>0.4782<br>0.5440<br>0.6020<br>0.6726<br>0.7208 | -0.0006<br>-0.0004<br>0.0003<br>-0.0005<br>0.0010<br>0.0009    | 0.9107<br>0.8783<br>0.8391<br>0.7985<br>0.7400<br>0.6931 | -0.10907<br>-0.04134<br>0.02162<br>0.08023<br>0.10293<br>0.14816               | -0.06348<br>-0.01938<br>0.03542<br>0.10122<br>0.13672<br>0.18612   | -0.35022<br>-0.34463<br>-0.34916<br>-0.31694<br>-0.33967<br>-0.27686 | -0.04258<br>-0.00257<br>0.04400<br>0.10588<br>0.14316<br>0.19852    |
| 600.9949<br>602.0380<br>602.8411<br>603.4657<br>603.9240<br>604.2347 | 70.5223<br>70.2712<br>70.0938<br>69.9672<br>69.8943<br>69.8727                       | 266 .3340<br>264 .9160<br>263 .5972<br>262 .3787<br>261 .2405<br>260 .1717<br>259 .1773 | 2.0909<br>1.6417<br>1.3154<br>1.0655<br>0.8843<br>0.7425     | 0.7772<br>0.8361<br>0.8734<br>0.9072<br>0.9474<br>0.9723 | 0.0009<br>0.0010<br>0.0009<br>0.0002<br>0.0004<br>0.0001       | 0.6293<br>0.5486<br>0.4871<br>0.4207<br>0.3201<br>0.2337 | 0.13814<br>0.10880<br>0.07486<br>-0.00760<br>-0.14202<br>-0.15302              | 0.18271<br>0.16369<br>0.14194<br>0.08180<br>-0.02128<br>-0.03289   | -0.27284<br>-0.25473<br>-0.17477<br>-0.12592<br>-0.11564<br>-0.02085 | 0.19530<br>0.17003<br>0.13760<br>0.04883<br>-0.10938<br>-0.25292    |
| 604.4399<br>604.5732<br>604.6569<br>546.3517<br>558.9196             | 69.8849<br>69.9166<br>69.9592<br>85.8970<br>83.7727                                  | 259.17773<br>258.2563<br>257.4103<br>288.4299<br>286.0648<br>283.4322                   | 0.6321<br>0.5421<br>0.4630<br>20.9376<br>21.9951             | 0.9859<br>0.9931<br>0.9969<br>0.1558<br>0.2190<br>0.2816 | -0.0003<br>-0.0007<br>-0.0011<br>-0.0010<br>-0.0008<br>-0.0007 | 0.1672<br>0.1170<br>0.0781<br>0.9878<br>0.9757<br>0.9595 | 0.02244<br>0.30304<br>0.45546<br>-0.26366<br>-0.23467<br>-0.19054              | 0.08442<br>0.31046<br>0.43946<br>-0.20255<br>-0.16911              | -0.00680<br>0.10387<br>-0.06842<br>-0.37532<br>-0.36962<br>-0.34350  | -0.22162<br>0.07293<br>0.34802<br>-0.19103<br>-0.15780<br>-0.10728  |
| 569.2271<br>577.4357<br>583.8474<br>588.7965<br>592.5991<br>595.5330 | 81.4541<br>79.2631<br>77.3568<br>75.7830<br>74.5166<br>73.5147                       | 280.7493<br>278.1547<br>275.7276<br>273.4990<br>271.4764                                | 19.4687<br>15.6793<br>11.9240<br>8.7957<br>6.4283<br>4.7369  | 0.3461<br>0.4107<br>0.4763<br>0.5412<br>0.5990           | -0.0004<br>-0.0009<br>-0.0006<br>0.0000<br>-0.0009             | 0.9382<br>0.9118<br>0.8793<br>0.8409<br>0.8008           | -0.13733<br>-0.07295<br>0.00132<br>0.06493                                     | -0.12184<br>-0.07705<br>-0.04244<br>0.00532<br>0.06871<br>0.13641  | -0.32438<br>-0.31724<br>-0.30965<br>-0.30908<br>-0.27901             | -0.05633<br>-0.01928<br>0.02061<br>0.07365<br>0.13961               |
| 597.7992<br>599.5550<br>600.9293<br>601.9886<br>602.8044<br>603.4402 | 74.5166<br>73.5147<br>72.7309<br>72.1165<br>71.6369<br>71.2752<br>71.0027<br>70.7937 | 269.6295<br>267.9451<br>264.9893<br>263.6614<br>262.4334                                | 3.5287<br>2.6604<br>2.0536<br>1.6212<br>1.3045               | 0.6698<br>0.7185<br>0.7733<br>0.8336<br>0.8718<br>0.9051 | 0.0006<br>0.0006<br>0.0003<br>0.0006<br>0.0006                 | 0.7425<br>0.6956<br>0.6341<br>0.5523<br>0.4899<br>0.4252 | 0.14745<br>0.19943<br>0.21523<br>0.21150<br>0.18298<br>0.08762                 | 0.17001<br>0.21859<br>0.23025<br>0.22994<br>0.22214<br>0.15896     | -0.29537<br>-0.23847<br>-0.23004<br>-0.21626<br>-0.14403<br>-0.09999 | 0.17818<br>0.23209<br>0.24255<br>0.23568<br>0.22354<br>0.15244      |
| 603.9086<br>604.2268<br>604.4364<br>604.5724<br>604.6575<br>546.2196 | 70.6505<br>70.5706<br>70.5340<br>70.5241<br>70.5307<br>87.2258<br>85.5378            | 261.2849<br>260.2048<br>259.1988<br>258.2667<br>257.4113<br>288.4522                    | 0.8845<br>0.7453<br>0.6363<br>0.5471<br>0.4674<br>15.4503    | 0.9461<br>0.9717<br>0.9857<br>0.9930<br>0.9969<br>0.1552 | 0.0002<br>-0.0001<br>-0.0004<br>-0.0007<br>-0.0013<br>-0.0014  | 0.3240<br>0.2364<br>0.1685<br>0.1179<br>0.0784<br>0.9879 | -0.09681<br>-0.23793<br>-0.11441<br>0.21740<br>0.44653<br>-0.17763             | 0.01498<br>-0.13018<br>-0.07112<br>0.20098<br>0.41269<br>-0.12794  | -0.10108<br>-0.02618<br>-0.02980<br>0.06814<br>-0.09971<br>-0.19899  | -0.01993<br>-0.24294<br>-0.30235<br>-0.03986<br>0.24429<br>-0.11723 |
| 558.7582<br>569.0583<br>577.2699<br>583.6910<br>588.6533<br>592.4703 | 85.5378<br>83.4242<br>81.2720<br>79.2957<br>77.5908<br>76.1708<br>75.0135            | 286.1026<br>283.4832<br>280.8113<br>278.2270<br>275.8064<br>273.5819<br>271.5622        | 18.5862<br>17.4718<br>14.5355<br>11.2797<br>8.4283<br>6.2176 | 0.2179<br>0.2806<br>0.3444<br>0.4087<br>0.4745<br>0.5385 | -0.0010<br>-0.0008<br>-0.0006<br>-0.0011<br>-0.0008<br>-0.0003 | 0.9760<br>0.9598<br>0.9388<br>0.9127<br>0.8803<br>0.8426 | -0.19736<br>-0.16963<br>-0.12492<br>-0.06926<br>-0.00371<br>0.05368<br>0.09545 | -0.13565<br>-0.10033<br>-0.05931<br>-0.03066<br>0.00599<br>0.05911 | -0.31686<br>-0.32043<br>-0.29836<br>-0.29132<br>-0.29130<br>-0.29771 | -0.12354<br>-0.08595<br>-0.03972<br>-0.00761<br>0.02365<br>0.06648  |
| 595.4205<br>597.7031<br>599.4744<br>600.8649<br>601.9401<br>602.7681 | 74.0826<br>73.3332<br>72.7330<br>72.2657<br>71.9018                                  | 269.7151<br>268.0272<br>266.4915<br>265.0615<br>263.7249                                | 4.6134<br>3.4573<br>2.6180<br>2.0302<br>1.6093<br>1.2991     | 0.5960<br>0.6672<br>0.7161<br>0.7694<br>0.8312<br>0.8702 | -0.0013<br>0.0002<br>0.0003<br>-0.0002<br>0.0003<br>0.0004     | 0.8030<br>0.7449<br>0.6980<br>0.6387<br>0.5560<br>0.4926 | 0.10855<br>0.13093<br>0.12186<br>0.08030<br>-0.00411                           | 0.12046<br>0.15198<br>0.18459<br>0.17988<br>0.14760<br>0.08804     | -0.28183<br>-0.31511<br>-0.28110<br>-0.28636<br>-0.31349<br>-0.27274 | 0.12244<br>0.15960<br>0.20581<br>0.20410<br>0.16473<br>0.09577      |
| 603.4148<br>603.8933<br>604.2188<br>604.4330<br>604.5715<br>604.6582 | 71.6132<br>71.4018<br>71.2652<br>71.1810<br>71.1305<br>71.1019                       | 262.4876<br>261.3291<br>260.2377<br>259.2202<br>258.2771<br>257.4124                    | 1.0601<br>0.8869<br>0.7494<br>0.6414<br>0.5525<br>0.4718     | 0.9030<br>0.9448<br>0.9710<br>0.9855<br>0.9929<br>0.9969 | -0.0005<br>-0.0001<br>-0.0001<br>-0.0004<br>-0.0008<br>-0.0012 | 0.4296<br>0.3278<br>0.2390<br>0.1698<br>0.1187<br>0.0786 | -0.14932<br>-0.33598<br>-0.39800<br>-0.15920<br>0.17782<br>0.43318             | -0.02386<br>-0.18720<br>-0.27291<br>-0.09592<br>0.18772<br>0.40420 | -0.23985<br>-0.27091<br>-0.21593<br>-0.21583<br>-0.06943<br>-0.27384 | -0.03595<br>-0.26619<br>-0.43350<br>-0.34463<br>-0.03132<br>0.21585 |

## pylon top aft of plate

| X<br>545 9979  | Y<br>87.8095  | 228 2664   | AREA<br>73.4441   | EX<br>0.0753   | EY<br>0.9972<br>0.9875   | -0.0026   | CP1<br>-0.26528   | CP2<br>-0.19788  | CP3<br>-0.66882  | CP4<br>-0.13638   |
|--|---|--|---|--|--|---|---|--|--|---|
| 545.9979<br>558.2789<br>568.4683<br>576.6405<br>583.0624<br>588.0476   | 86.4119<br>84.4716<br>82.3940   | 228.2664<br>230.1908<br>232.4404<br>234.7827<br>237.0826<br>239.2639<br>241.1437   | 73.4441<br>54.4840<br>38.9483<br>27.1004<br>18.5949<br>12.7105                      | EX<br>0.0753<br>0.1576<br>0.2228<br>0.2751<br>0.3162<br>0.3481 | 0.9875<br>0.9749<br>0.9614<br>0.9487<br>0.9375                     | -0.0006<br>0.0004<br>0.0011<br>0.0015<br>0.0018     | -0.26528<br>-0.23606<br>-0.21157<br>-0.14344<br>-0.08408<br>-0.03802  | -0.17187<br>-0.15467<br>-0.09670<br>-0.04268<br>0.00003  | -0.70698<br>-0.67384<br>-0.54344<br>-0.43312<br>-0.34925<br>-0.27943<br>-0.22250   | -0.08755<br>-0.06002<br>-0.00526<br>0.03709<br>0.06552  |
| 591.9005<br>594.8912<br>597.2170<br>599.0348   | 80.4205<br>78.6725<br>77.1863<br>75.9527<br>74.9438<br>74.1188  | 241.2894<br>243.1437<br>244.8518<br>246.4242<br>247.8631   | 8.7405<br>6.0903<br>4.2966<br>3.0634<br>2.2133                                      | 0.3730<br>0.3898<br>0.4051<br>0.4182                           | 0.9278<br>0.9209<br>0.9143<br>0.9083                               | 0.0018<br>0.0014<br>0.0031<br>0.0034<br>0.0025      | 0.00900<br>0.05641<br>0.08931<br>0.12101<br>0.14792   | 0.04285<br>0.08670<br>0.11800<br>0.14767<br>0.17312  | -0.27943<br>-0.22250<br>-0.18981<br>-0.15815<br>-0.13955   | 0.09571<br>0.12872<br>0.15168<br>0.17644<br>0.20061   |
| 600.4702<br>601.5916<br>602.4689<br>603.1636<br>603.6888   | 74.1188<br>73.4469<br>72.9131<br>72.4878<br>72.1424<br>71.8774  |  | 1.6092<br>1.1741<br>0.8459<br>0.5977  | 0.4255<br>0.4316<br>0.4416<br>0.4517<br>0.4548                 | 0.9049<br>0.9021<br>0.8972<br>0.8922<br>0.8906                     | 0.0008<br>-0.0006<br>-0.0006<br>-0.0024             | 0.16718   | 0.19190<br>0.21704<br>0.24940<br>0.28599<br>0.33171<br>0.38036   | -0.13705<br>-0.13511<br>-0.14117<br>-0.17880   | 0.22123<br>0.25106<br>0.29194<br>0.33870  |
| 604.0621<br>604.3241<br>604.5088<br>604.6383   | 71.6891<br>71.5574<br>71.4644<br>71.3975<br>87.8423   | 250.24760<br>251.45568<br>252.76709<br>253.8209<br>254.7392<br>255.7392<br>255.5328  | 0.4037<br>0.2521<br>0.1324<br>0.0385<br>72.7780<br>57.5789                          | 0.4516<br>0.4456<br>0.4450<br>0.4478<br>0.0733                 | 0.8922<br>0.8953<br>0.8956<br>0.8942<br>0.9973                     | -0.0004<br>0.0005<br>0.0016<br>0.0035<br>-0.0018    | 0.26839<br>0.31976<br>0.37753<br>0.42706<br>0.49223   |  | -0.19675<br>-0.20974<br>-0.15756<br>-0.21655<br>-0.66652   | 0.39262<br>0.43808<br>0.46466<br>0.45160<br>-0.09593  |
| 545.7231<br>557.5414<br>567.4364<br>575.4548<br>581.8199   | 84.7054<br>82.7274<br>80.8269   | 235.0736<br>236.6692<br>238.4007<br>240.1535   | 57.5789<br>43.4304<br>31.7903<br>22.8518<br>16.6446<br>11.3857                      | 0.1530<br>0.2680<br>0.2680<br>0.3088<br>0.3409<br>0.3661       | 0.9882<br>0.9763<br>0.9634<br>0.9511                               | -0.0016<br>-0.0010<br>-0.0005<br>-0.0003            | 0.49223<br>-0.24038<br>-0.18139<br>-0.11772<br>-0.04669<br>-0.00562<br>0.01265  | 0.47758<br>-0.17874<br>-0.12712<br>-0.07927<br>-0.01921<br>0.01943<br>0.03898  | -0.66652<br>-0.72109<br>-0.61985<br>-0.46541<br>-0.37282<br>-0.32258   | -0.02421<br>0.02078<br>0.06607<br>0.09067<br>0.09916  |
| 586.8115<br>590.7106<br>593.7658<br>596.1692<br>598.0745   | 79.1235<br>77.6575<br>76.4240<br>75.4013<br>74.5546   | 241.8580<br>243.4746<br>244.9818<br>246.3898<br>247.7040   |   | 0.3996   | 0.9401<br>0.9306<br>0.9229<br>0.9167<br>0.9106                     | -0.0002<br>-0.0004<br>-0.0001<br>0.0004<br>0.0008   | 0.03112<br>0.05540<br>0.07656<br>0.10140  | 0.05801  | -0.24427<br>-0.21622<br>-0.18797   | 0.10857<br>0.12368<br>0.13715<br>0.15567  |
| 599.5961<br>600.8097<br>601.7880<br>602.5808<br>603.2049   | 73.8539<br>73.2851<br>72.8214<br>72.4355<br>72.1235   | 248.9223<br>250.0708<br>251.1640<br>252.1943<br>253.1704<br>254.1066   | 4.4749<br>3.3042<br>2.4550<br>1.8313<br>1.3408<br>0.9587                            | 0.4228<br>0.4268<br>0.4355<br>0.4462<br>0.4512<br>0.4517       | 0.9062<br>0.9043<br>0.9002<br>0.8950<br>0.8924                     | 0.0014<br>-0.0020<br>-0.0034<br>-0.0015<br>-0.0003  | 0.12982<br>0.15944<br>0.18939<br>0.22767<br>0.27401<br>0.32771  | 0.108210<br>0.10216<br>0.12916<br>0.15699<br>0.18529<br>0.21354<br>0.24886<br>0.29051<br>0.33789<br>0.38987                  | -0.16820<br>-0.15960<br>-0.15403<br>-0.14065<br>-0.13138<br>-0.12769   | 0.17952<br>0.20720<br>0.23843<br>0.28017<br>0.32988   |
| 603.6850<br>604.0583<br>604.3537<br>604.5879   | 71.8795<br>71.6898<br>71.5417<br>71.4227<br>87.8642   | 254.1066<br>255.0006<br>255.8445<br>256.6259<br>239.5533<br>240.3485   | 0.6566<br>0.4132<br>0.2171<br>0.0626<br>71.7991<br>57.5742                          | 0.4517<br>0.4471<br>0.4469<br>0.4504<br>0.0718                 | 0.8924<br>0.8922<br>0.8945<br>0.8946<br>0.8928<br>0.9974           | 0.0026<br>0.0007<br>0.0004<br>0.0029<br>-0.0012     | 0.44082   | 0.33789<br>0.38987<br>0.43574<br>0.49133<br>-0.22397<br>-0.19664   | -0.17801<br>-0.15945<br>-0.21140<br>-0.84950   | 0.38429<br>0.43346<br>0.47387<br>0.46858<br>-0.11001  |
| 545.5417<br>556.9553<br>566.4685<br>574.2367<br>580.4712   | 867.00442<br>86.6322<br>84.9225<br>83.0645<br>81.2608<br>79.6222<br>78.1909   | 242.6269<br>243.8711   | 33.6146<br>24.8300  | 0.1492<br>0.2103<br>0.2602<br>0.3002<br>0.3321                 | 0.9888<br>0.9776<br>0.9656<br>0.9539                               | -0.0016<br>-0.0013<br>-0.0010<br>-0.0010            | -0.29398<br>-0.26390<br>-0.19870<br>-0.11470<br>-0.05367<br>-0.01831  | -0.19664<br>-0.14637<br>-0.07255<br>-0.01488<br>0.01955  | -0.95164<br>-0.79007<br>-0.55805<br>-0.40693   | -0.05412<br>-0.02383<br>0.01581<br>0.04719<br>0.06660   |
| 585.4221<br>589.3423<br>592.4551<br>594.9413<br>596.9447   | 75:9316   | 245.1060<br>246.2996<br>247.4335<br>248.5083<br>249.5254   | 18.1495<br>13.2459<br>9.6972<br>7.1450<br>3.9262<br>2.9227<br>2.1764                | 0.3572<br>0.3781<br>0.3921<br>0.4063                           | 0.9432<br>0.9340<br>0.9258<br>0.9199<br>0.9137                     | -0.0010<br>-0.0013<br>-0.0005<br>-0.0011<br>-0.0005 | 0.01024<br>0.03707<br>0.06461<br>0.09103  | 0.04632<br>0.07103<br>0.09653<br>0.12098   | -0.32765<br>-0.27739<br>-0.24119<br>-0.21122<br>-0.18927   | 0.08423<br>0.10209<br>0.12107<br>0.14052<br>0.16494   |
| 598.5692<br>599.8947<br>600.9905<br>601.8982<br>602.6404   | 75.0520<br>74.3281<br>73.7170<br>73.2072<br>72.7729<br>72.4057<br>72.0986<br>71.8433<br>71.6310   | 250.4824<br>251.3925   | 3.9262<br>2.9227<br>2.1764<br>1.5841<br>1.1217                                      | 0.4182<br>0.4207<br>0.4279<br>0.4389<br>0.4462                 | 0.9084<br>0.9072<br>0.9038<br>0.8985<br>0.8949                     | 0.0007<br>-0.0032<br>-0.0034<br>0.0002<br>0.0027    | 0.12102<br>0.15541<br>0.18330<br>0.21889<br>0.26326   | 0.14881<br>0.18042<br>0.20649<br>0.23914<br>0.27893<br>0.32198<br>0.37075  | -0.17468<br>-0.16703<br>-0.16758<br>-0.16216<br>-0.15862   | 0.19541<br>0.22284<br>0.25904<br>0.30297  |
| 603.2471<br>603.7512<br>604.1755<br>604.5304<br>545.4229   | 72.0986<br>71.8433<br>71.6310<br>71.4517  | 253.0939<br>253.8846<br>254.6453<br>255.3741<br>256.0627<br>256.3448   | 0.7619<br>0.4749<br>0.2461<br>0.0695<br>70.8895                                     | 0.4505<br>0.4475<br>0.4485<br>0.4532<br>0.0708                 | 0.8928<br>0.8943<br>0.8938<br>0.8914<br>0.9975                     | 0.0044<br>0.0001<br>-0.0010<br>0.0016<br>-0.0008    | 0.31210<br>0.36919<br>0.41867<br>0.47944<br>-0.31527  | 0.32198<br>0.37075<br>0.41434<br>0.45943<br>-0.22427<br>-0.22937<br>-0.17166   | -0.15332<br>-0.16700<br>-0.14768<br>-0.17602<br>-0.97888   | 0.34934<br>0.39351<br>0.42764<br>0.40895<br>-0.10741  |
| 556.5295<br>565.7042<br>573.2260<br>579.3151   | 87.8787<br>86.7036<br>85.0907<br>83.3376<br>81.6234   | 245.3448<br>245.8236<br>246.4877<br>247.2398<br>248.0298<br>248.8256   | 70.8895<br>56.8242<br>44.2910<br>33.8805<br>25.4231<br>18.8606                      | 0.1464<br>0.2052<br>0.2535                                     | 0.9975<br>0.9892<br>0.9787<br>0.9673<br>0.9563<br>0.9461           | -0.0011<br>-0.0009<br>-0.0006<br>-0.0005<br>-0.0004 | -0.30083<br>-0.22775<br>-0.13569<br>-0.06905<br>-0.02941  | -0.00002   | -1.12662<br>-0.90094<br>-0.59801<br>-0.40345   | -0.05769<br>-0.03597<br>-0.00236<br>0.02826<br>0.05058  |
| 584.2049<br>588.1262<br>591.2818<br>593.8394<br>595.9319   | 80.0484<br>78.6536<br>77.4410<br>76.3996<br>75.5093   | 248.8256<br>249.6665<br>250.6661<br>251.7783<br>251.7783<br>252.0750<br>253.6865   | 13.9390<br>10.3014<br>7.6347<br>5.6688  | 0.3240<br>0.3490<br>0.3707<br>0.3851<br>0.3995<br>0.4126       | 0.9371<br>0.9288<br>0.9229<br>0.9167<br>0.9109                     | -0.0005<br>0.0000<br>-0.0008<br>-0.0003<br>0.0002   | -0.00057<br>0.02362<br>0.04965<br>0.07514<br>0.10531  | 0.04212<br>0.06356<br>0.08626<br>0.10868<br>0.13566  | -0.30908<br>-0.25913<br>-0.22740<br>-0.20099<br>-0.18161<br>-0.16801   | 0.06955<br>0.08640<br>0.10427<br>0.12222<br>0.14519   |
| 597.6555<br>599.0881<br>600.2932<br>601.3090<br>602.1627   | 74.7449<br>74.0940<br>73.5387<br>73.0566<br>72.6387<br>72.2779  | 252.4400<br>253.6865<br>253.6865<br>254.2716<br>254.8312<br>255.3681   | 4.1986<br>3.1063<br>2.2850<br>1.6400<br>1.1408                                      | 0.4233<br>0.4340<br>0.4420                                     | 0.9095<br>0.9060<br>0.9009<br>0.8970                               | -0.0025<br>-0.0008<br>0.0031<br>0.0048              | 0.14147<br>0.17272<br>0.21284<br>0.26106  | 0.16801<br>0.19633<br>0.23227<br>0.27497<br>0.32104<br>0.37246<br>0.41719  | -0.15945<br>-0.15686<br>-0.15006<br>-0.14540<br>-0.14062   | 0.17477<br>0.20251<br>0.23953<br>0.28370<br>0.33103   |
| 602.8845<br>603.5026   | 71.7025   | 255.8797   | 0.7587<br>0.4618<br>0.2329<br>0.0638<br>70.2674                                     | 0.4478<br>0.4470<br>0.4497<br>0.4547<br>0.0702                 | 0.8941<br>0.8945<br>0.8932<br>0.8906<br>0.9975                     | 0.0034<br>-0.0016<br>-0.0023<br>0.0001<br>-0.0004   | 0.31363<br>0.37375<br>0.42410<br>0.50358<br>-0.32312  | 0.37246<br>0.41719<br>0.46994<br>-0.25679  | -0.15680<br>-0.15118<br>-0.18292   | 0.37727<br>0.41648<br>0.41200   |
| 545 . 3540<br>545 . 3540<br>556 . 2710<br>565 . 2228<br>572 . 5732<br>578 . 5554<br>583 . 3950<br>587 . 3400 | 87.8871<br>86.7466<br>85.1944<br>83.5096<br>81.8554   | 251.3929<br>251.7099<br>252.0711<br>252.4535<br>252.8420   | 0.2329<br>0.0638<br>70.5680<br>43.6841<br>33.6549<br>25.4619                        | 0.1448<br>0.2020<br>0.2492<br>0.2876<br>0.3187                 | 0.9895<br>0.9794<br>0.9685<br>0.9578<br>0.9479                     | -0.0006<br>-0.0004<br>-0.0002<br>0.0000<br>0.0001   | -0.32312<br>-0.32690<br>-0.25527<br>-0.16168<br>-0.09117<br>-0.04701  | -0.25679<br>-0.25617<br>-0.19870<br>-0.11103<br>-0.035941<br>0.00597   | -1.26132<br>-0.98950<br>-0.63426<br>-0.40598<br>-0.29869   | -0.10373<br>-0.06507<br>-0.05558<br>-0.02616<br>0.00819<br>0.03577  |
| 587.3100<br>587.3100<br>593.4912<br>593.0964<br>595.2503<br>597.0450<br>598.5541                             | 78.9561<br>77.7544<br>76.7101<br>75.8055  | 253.2269<br>253.6021<br>253.9663<br>254.3185   | 14.1715<br>10.5280<br>7.8243<br>5.8094  | 0.3437<br>0.3650<br>0.3806<br>0.3951                           | 0.9479<br>0.9391<br>0.9347<br>0.9186<br>0.9132<br>0.9104<br>0.9018 | 0.0002<br>0.0001<br>-0.0004<br>-0.0001<br>-0.0005   | -0.01620<br>0.00890<br>0.03481<br>0.06205   | 0.05704<br>0.07823   | -0.24949<br>-0.24949<br>-0.22190<br>-0.20100<br>-0.18521<br>-0.17382   | 0.05744<br>0.07528<br>0.09197   |
| 600.9291   | 75.0204<br>74.3413<br>73.7513<br>73.2339<br>72.7815   | 256. 3588<br>2561. 1664<br>2561. 1664<br>2561. 17099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.0709<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.07099<br>1.0709<br>1.0709<br>1.0709<br>1.07099<br>1.07 | 19.1435<br>10.7180<br>17.8243<br>4.15243<br>4.12949<br>2.262460<br>1.1259<br>0.4319 | 0.4138<br>0.4229<br>0.4322                                     | 0.0303   | -0.0010<br>0.0017<br>0.0042<br>0.0035               | 0.12918<br>0.16380<br>0.20663<br>0.25450  | 0.15746<br>0.18743<br>0.22448<br>0.26577   | -0.16554<br>-0.16119<br>-0.15632<br>-0.15566   | 0.15750<br>0.18525<br>0.22100<br>0.26078  |
| 601.6632<br>603.3556<br>603.9536<br>604.4606<br>545.3313<br>556.1844   | 83.5096<br>81.8554<br>80.8554<br>77.7544<br>76.7101<br>75.80204<br>74.3413<br>73.2339<br>72.3868<br>72.0441<br>74.413<br>73.43868<br>72.4441<br>74.4873<br>73.48890 | 256.1729<br>256.4357<br>256.6791<br>256.8972<br>256.9989   | 0.2124  | 0.4442<br>0.4463<br>0.4503<br>0.4554<br>0.0700<br>0.1442       | 0.8959<br>0.8949<br>0.8929<br>0.8903<br>0.9975<br>0.9895           | 0.0001<br>-0.0033<br>-0.0029<br>-0.0011<br>0.0000   | -0.04701<br>-0.0184815<br>0.0084815<br>0.0084815<br>0.00932748<br>0.00932748<br>0.1166863<br>0.2254561<br>0.361381<br>0.48180204<br>-0.3334577<br>-0.265984 | 0.10049<br>0.112743<br>0.115746<br>0.18746<br>0.225477<br>0.30946<br>0.335636<br>0.39968<br>0.44420<br>-0.27141<br>-0.215597 | -0.18521<br>-0.17384<br>-0.165149<br>-0.155636<br>-0.155626<br>-0.15428<br>-0.15240<br>-0.15249<br>-1.134843<br>-1.04982<br>-0.66262 | 0.10937<br>0.10937<br>0.13109<br>0.15750<br>0.18525<br>0.22100<br>0.26078<br>0.30184<br>0.34028<br>0.37163<br>0.34766<br>-0.08711 |
| 556.1844<br>565.0592<br>572.3491<br>578.2927<br>583.1134   | 87.8900<br>86.7609<br>85.2292<br>83.5677<br>81.9343<br>80.4189  | 256.9989<br>256.9989<br>256.9989<br>256.9989<br>256.9989<br>256.9989   | 70.0493<br>55.2036<br>43.4215<br>33.5220<br>25.4262<br>19.0658                      | 0.1442<br>0.2010<br>0.2477<br>0.2859<br>0.3168                 | 0.9895<br>0.9796<br>0.9688<br>0.9583<br>0.9485                     | 0.0000<br>0.0000<br>0.0000<br>0.0000                | -0.33473<br>-0.26507<br>-0.16984<br>-0.09684<br>-0.05150  | -0.27141<br>-0.21550<br>-0.12597<br>-0.04829<br>0.00335  | -1.34843<br>-1.04982<br>-0.66262<br>-0.41607<br>-0.30422   | -0.06668  |
|  |   |  |   |  |  |   |   |  |  |   |

| 587.0250<br>590.2146   | 79.0599<br>77.8627<br>76.8177   | 256.9989<br>256.9988<br>256.9989   | 14.2204<br>10.5821<br>7.8709  | 0.3420<br>0.3628<br>0.3791<br>0.3936   | 0.9397<br>0.9319<br>0.9253                     | 0.0000<br>0.0000<br>0.0000                          | -0.02192<br>0.00111  | 0.03486<br>0.05567<br>0.07463  | -0.25760<br>-0.23330<br>-0.21495  | 0.05459<br>0.07226<br>0.08673   |
|--|---|--|---|--|--|---|--|--|---|---|
| 592.8365<br>595.0122<br>596.8325<br>598.3693<br>599.6789                         | 75.9080<br>75.1158<br>74.4264   | 256.9989<br>256.9989   | 5.8430  | 0.3936<br>0.4054<br>0.4138<br>0.4239<br>0.4322   | 0.9193<br>0.9141<br>0.9104<br>0.9057           | 0.0000<br>0.0000<br>0.0000                          | 0.02549<br>0.05295<br>0.08433<br>0.11920<br>0.15598  | 0.09549<br>0.12026<br>0.14872<br>0.17928   | -0.19976<br>-0.18785<br>-0.17764<br>-0.17086<br>-0.16436  | 0.10200<br>0.12086<br>0.14425<br>0.17082  |
| 600.7998<br>601.7615<br>602.5908<br>603.3087                                     | 73.8231<br>73.8231<br>73.82926<br>72.8284<br>72.4227<br>72.0675<br>71.7573  | 256.9989<br>256.9989<br>256.9989<br>256.9989<br>256.9989   | 4.3124<br>3.1615<br>2.6142<br>1.0987<br>0.7105<br>0.4189                                  | 0.4376<br>0.4417<br>0.4455   | 0.9018<br>0.8992<br>0.8972<br>0.8953           | 0.0000<br>0.0000<br>-0.0001<br>-0.0001              | 0.115298<br>0.115298<br>0.159860<br>0.24514<br>0.295611<br>0.4114747<br>-0.2751189<br>-0.2163917<br>-0.04492 | 0.21499<br>0.25384<br>0.29612<br>0.34444<br>0.39282  | -0.16436<br>-0.16199<br>-0.15713<br>-0.15784  | 0.20259<br>0.23642<br>0.27223<br>0.30895  |
| 603.9284<br>604.4529<br>545.3541<br>556.2711                                     | 87.8872<br>86.7467  | 256.9989<br>256.9989<br>256.9989<br>256.9989<br>262.8315<br>262.2880   | 0.0539<br>70.2679   | 0.4501<br>0.4552<br>0.0702<br>0.1448   | 0.8930<br>0.8904<br>0.9975<br>0.9895           | 0.0000<br>0.0004<br>0.0005                          | 0.41470<br>0.51747<br>-0.27936<br>-0.31189   | -0.22696<br>-0.25391   | -0.16199<br>-0.15713<br>-0.15784<br>-0.14787<br>-0.17319<br>-1.15990<br>-1.37832  | 0.34405<br>0.34939<br>-0.05735<br>-0.04355  |
| 565.2228<br>572.5732<br>578.5554<br>583.3950<br>587.3100                         | 85.1944<br>83.5096<br>81.8553<br>80.3245  | 262.2880<br>262.2880<br>261.9267<br>261.5443<br>261.1558<br>260.7709   | 43.6839<br>43.6839<br>25.4620<br>19.0431<br>14.1717<br>10.5287                            | 0.1448<br>0.20492<br>0.2876<br>0.3186<br>0.3650<br>0.3857  | 0.9794<br>0.9685<br>0.9578<br>0.9479<br>0.9391 | 0.0004<br>0.0002<br>0.0000<br>-0.0001<br>-0.0002    | -0.16397<br>-0.09412<br>-0.04925<br>-0.02101   | -0.19843<br>-0.11821<br>-0.04874<br>0.00296<br>0.03674   | -0 60044  | -0.04172<br>-0.01971<br>0.00763<br>0.03376<br>0.05641   |
| 590.4912<br>593.0965<br>595.2503<br>597.0448                                     | 80.3245<br>78.9561<br>77.7545<br>76.7101<br>75.8055<br>75.0204  | 260.3956<br>260.0315<br>259.6793<br>259.3405   |   | 0.3650<br>0.3807<br>0.3951<br>0.4076   | 0.9310<br>0.9247<br>0.9186<br>0.9132           | -0.0001<br>0.0004<br>0.0001<br>0.0005               | -0.00005<br>0.02369<br>0.05065<br>0.08014  | 0.05800  | -0.44143<br>-0.32944<br>-0.28283<br>-0.25858<br>-0.23987<br>-0.2368   | 0.07364<br>0.08710<br>0.10080<br>0.11689  |
| 598.5540<br>599.8361<br>600.9291<br>601.8621                                     | 74.3413   | 259.0132<br>258.6970<br>258.3934   | 5.8094<br>4.2924<br>3.1549<br>2.2947<br>1.6261<br>1.1137                                  | 0.4139<br>0.4229<br>0.4322<br>0.4389<br>0.4441   | 0.9103<br>0.9062<br>0.9018<br>0.8985<br>0.8960 | 0.0010<br>-0.0017<br>-0.0042<br>-0.0036             | 0.11307<br>0.14640<br>0.18292<br>0.22377<br>0.27308<br>0.33413   | 0.14370<br>0.17024<br>0.19930<br>0.23141   | -0.21002<br>-0.19687<br>-0.18803<br>-0.17809<br>-0.17140<br>-0.16217  | 0.13710<br>0.15846<br>0.18118<br>0.20487<br>0.23191   |
| 602.6632<br>603.3556<br>603.9535<br>604.4606                                     | 73.2339<br>72.7815<br>72.3869<br>72.0431<br>71.7441<br>71.4873  | 258 : 1028<br>257 : 8250<br>257 : 5623<br>257 : 3188<br>257 : 1007   | 1.6261<br>1.1137<br>0.7258<br>0.4318<br>0.2124<br>0.0567<br>70.8902                       | 0.4465<br>0.4503<br>0.4554   | 0.8960<br>0.8948<br>0.8929<br>0.8903<br>0.9975 | -0.0001<br>0.0034<br>0.0030<br>0.0011<br>0.0008     |  | 0.09570<br>0.11783<br>0.114370<br>0.17024<br>0.19930<br>0.23141<br>0.26980<br>0.37831<br>0.44826<br>-0.129352<br>-0.129352<br>-0.14984 | -0.16217<br>-0.15711<br>-0.15006<br>-0.14933  | 0.23191<br>0.26422<br>0.30595<br>0.31090<br>-0.06160  |
| 545.4229<br>556.5296<br>565.7042<br>573.2260                                     | 87.8788<br>86.7038<br>85.0908<br>83.3376<br>81.6233   | 268.1743<br>267.5102<br>266.7581   | 56.5243<br>44.2912<br>33.8806   | 0.1464<br>0.2052<br>0.2535<br>0.2926<br>0.3240<br>0.3490   | 0.9892<br>0.9787<br>0.9673<br>0.9562           | 0.0008<br>0.0011<br>0.0009<br>0.0006<br>0.0005      | 0.49638<br>-0.22580<br>-0.25899<br>-0.20176<br>-0.13338<br>-0.08165  | -0.19933<br>-0.22332<br>-0.14984<br>-0.06048<br>-0.00473<br>0.02506  | -1.11931<br>-1.31574<br>-1.03766<br>-0.67634<br>-0.44806  | -0.04701<br>-0.02538<br>0.02509<br>0.06579  |
| 579.3151<br>584.2049<br>588.1262<br>591.2818<br>593.8394                         | 80.0483<br>78.6536<br>77.4410   | 265.9680<br>265.1722<br>264.3913<br>263.6378<br>262.9136<br>262.2195   | 70.6342<br>56.5242<br>44.2912<br>33.8806<br>25.4233<br>18.8390<br>10.3014<br>7.6347       | 0.3852   | 0.9461<br>0.9371<br>0.9288<br>0.9228           | 0.0004<br>0.0004<br>0.0000<br>0.0008                | -0.13336<br>-0.08165<br>-0.04429<br>-0.01828<br>0.00168<br>0.02549   | 0.02506<br>0.04732<br>0.06502<br>0.08176   | -0.44806<br>-0.34431<br>-0.29986<br>-0.27665<br>-0.25721<br>-0.23996<br>-0.22479<br>-0.20630  | 0.07753<br>0.07959<br>0.08511<br>0.09430  |
| 595.9318<br>597.6553<br>599.0879<br>600.2931<br>601.3089                         | 75.5993<br>75.5093<br>74.7449<br>74.0940<br>73.5387<br>73.0567<br>72.6387<br>72.780<br>71.9682<br>71.7024   | 260.9329   | 5.6687<br>4.1988<br>3.10652<br>1.28398<br>1.1409<br>0.7587                                | 0.3995<br>0.4126<br>0.4158<br>0.4233   | 0.9167<br>0.9109<br>0.9095<br>0.9060           | 0.0003<br>-0.0002<br>0.0025<br>0.0008               | 0.02549<br>0.05217<br>0.07972<br>0.10728<br>0.13226  | 0.09961<br>0.11901   | -0.23996<br>-0.22479<br>-0.20630<br>-0.19487  | 0.10650<br>0.12001<br>0.13491<br>0.14787  |
| 601.3089<br>602.1627<br>602.8845<br>603.5025<br>604.0343                         | 73.0567<br>72.6387<br>72.2780<br>71.9682  | 260.3114<br>259.7264<br>259.1668<br>258.6298<br>258.6391<br>257.2039   | 1.5398<br>1.1409<br>0.7587<br>0.4619<br>0.2330  | 0.4340<br>0.4419<br>0.4477<br>0.4472<br>0.4495   | 0.9009<br>0.8970<br>0.8942<br>0.8944<br>0.8933 | -0.0032<br>-0.0048<br>-0.0033<br>0.0015<br>0.0023   | 0.07217<br>0.10728<br>0.10728<br>0.13226<br>0.158324<br>0.190249<br>0.30362<br>0.39127                       | 0.15916<br>0.15916<br>0.17863<br>0.20121<br>0.23369<br>0.28416<br>0.35395  | -0.18075<br>-0.16889<br>-0.15406<br>-0.14709<br>-0.13232  | 0.15888<br>0.16941<br>0.18779<br>0.21802<br>0.27299   |
| 604.4856<br>545.5417<br>556.9553<br>566.4684                                     | 87.8643   | 257.2039<br>274.4446<br>273.6495<br>272.5725   | 0.0638<br>71.8002<br>57.5730<br>44.6208<br>33.6151<br>24.8303                             | 0.4547<br>0.0718   | 0.8906<br>0.9974<br>0.9888<br>0.9776           | -0.0001<br>0.0013<br>0.0016<br>0.0013               | -0.20806<br>-0.22643<br>-0.15118   | -0.19779<br>-0.20825   | -0.18499<br>-0.98034<br>-1.13113<br>-0.89846  | 0.32078<br>-0.09507<br>-0.07472<br>-0.04707   |
| 574.2367<br>580.4712<br>585.4221<br>589.3422<br>592.4551                         | 86.63226<br>84.9226<br>83.0646<br>81.26068<br>79.6222<br>78.1910<br>75.9316<br>75.0620<br>74.3281<br>73.7171<br>72.7730<br>72.4057<br>71.8433<br>71.6310  | 274.4446<br>273.6495<br>272.5725<br>271.3710<br>270.1268<br>268.8919<br>267.6982<br>266.5644   |   | 0.2103<br>0.2602<br>0.3002<br>0.3321<br>0.3572<br>0.3781<br>0.3922   | 0.9656<br>0.9539<br>0.9433<br>0.9340<br>0.9258 | 0.0010<br>0.0010<br>0.0010<br>0.0013<br>0.0005      | -0.07018<br>-0.03577<br>-0.02076<br>-0.00349<br>0.01732  | -0.03518<br>0.04713<br>0.08608<br>0.09207<br>0.09558   | -0.60086<br>-0.41816<br>-0.33673<br>-0.30124<br>-0.28132  | 0.00624<br>0.07418<br>0.12554<br>0.13873<br>0.13237   |
| 594.9411<br>596.9446<br>598.5691<br>599.8946                                     | 75.9316<br>75.0620<br>74.3281<br>73.7171  | 264.4724<br>263.5155   | 13.2460<br>9.6970<br>7.1451<br>53.9261<br>2.9227<br>2.1762                                | 0.3922<br>0.4063<br>0.4182<br>0.4207<br>0.4279   | 0.9199<br>0.9138<br>0.9084                     | 0.0011<br>0.0005<br>-0.0007                         | 0.04276<br>0.06921<br>0.09320  | 0.10576<br>0.12081<br>0.13567  | -0.26359<br>-0.24618<br>-0.22987<br>-0.20867<br>-0.19553<br>-0.17558  | 0.13068<br>0.13774<br>0.14606<br>0.15196  |
| 600.9905<br>601.8980<br>602.6403<br>603.2470                                     | 73.2073<br>72.7730<br>72.4057<br>72.0987  | 262.6054<br>261.7334<br>260.9040<br>260.1133<br>259.3527   | 1.1217<br>0.7619  | 0.4389<br>0.4462<br>0.4505   | 0.9072<br>0.9038<br>0.8985<br>0.8949<br>0.8928 | 0.0032<br>0.0034<br>-0.0002<br>-0.0027<br>-0.0043   | 0.11149<br>0.12243<br>0.12886<br>0.13786<br>0.17216  | 0.14847<br>0.15571<br>0.15847<br>0.15958<br>0.17757  | -0.14849  | 0.15187<br>0.14407<br>0.12942<br>0.12519  |
| 603.7512<br>604.1755<br>604.5304<br>545.7232                                     | 71 4517   | 258.6239<br>257.9352<br>257.3006<br>280.1653<br>278.9243   | 0.4749<br>0.2461<br>0.0695<br>72.7779<br>57.5789  | 0.4477<br>0.4486<br>0.4533<br>0.0732   | 0.8942<br>0.8937<br>0.8914<br>0.9973<br>0.9882 | -0.0002<br>0.0011<br>-0.0014<br>0.0018              | 0.24700<br>0.36990<br>0.49513<br>-0.21807<br>-0.21656  | 0.23021<br>0.33350<br>0.44609<br>-0.18765<br>-0.17714  | -0.14144<br>-0.12847<br>-0.15016<br>-0.74804<br>-0.84038  | 0.15396<br>0.23682<br>0.29900<br>-0.10832<br>-0.07358   |
| 567.5414<br>567.4364<br>575.4548<br>581.8199<br>586.8115                         | 87.8424<br>86.5339<br>84.7054<br>82.7274<br>80.8269<br>79.1235  | 278.9243<br>275.5973<br>275.5973<br>273.8444<br>272.1399<br>270.5233   | 43.4312   | 0.1530<br>0.2165<br>0.2680<br>0.3088<br>0.3409   | 0.9763<br>0.9634<br>0.9511<br>0.9401           | 0.0017<br>0.0010<br>0.0005<br>0.0003<br>0.0002      | -0.21030<br>-0.14777<br>-0.04775<br>0.01704<br>0.02646   | -0.12226<br>-0.05391<br>0.01978<br>0.09939   | -0.66464<br>-0.45226<br>-0.33305<br>-0.28407  | -0.04156<br>-0.00625<br>0.03073<br>0.09357  |
| 590.7105<br>593.7657<br>596.1691<br>598.0744                                     | 77.6575<br>76.4241<br>75.4013<br>74.5546  | 269.0161<br>267.6081   | 22. 8522<br>16. 6451<br>8. 3856<br>6. 0989<br>4. 4752                                     | 0.3850   | 0.9306<br>0.9229<br>0.9167<br>0.9106           | 0.0004<br>0.0000<br>-0.0004<br>-0.0009              | 0.02530<br>0.04004<br>0.06706<br>0.09469   | 0.14037<br>0.14129<br>0.13948<br>0.14884   | -0.26432<br>-0.25044<br>-0.24238<br>-0.22801  | 0.15876<br>0.18399<br>0.17849<br>0.17764<br>0.177972  |
| 599.5961<br>600.8097<br>601.7879<br>602.5808<br>603.2049                         | 76.4241<br>75.4013<br>74.5549<br>73.85539<br>72.8215<br>72.1235<br>72.1235<br>71.8789   | 265.0757<br>263.9272<br>262.8340<br>261.8037   | 4.47052<br>3.4553<br>1.8313<br>1.3410<br>0.9586   | 0.4133<br>0.4228<br>0.4268<br>0.4354<br>0.4461   | 0.9062<br>0.9043<br>0.9002<br>0.8950           | -0.0014<br>0.0020<br>0.0034<br>0.0014<br>0.0003     | 0.11643<br>0.12725<br>0.12352<br>0.10652   | 0.16007<br>0.16623<br>0.16307<br>0.14818   | -0.21416<br>-0.19872<br>-0.18410<br>-0.16404  | 0.17972<br>0.17790<br>0.16573<br>0.13891<br>0.09764   |
| 603.2049<br>603.6849<br>604.0583<br>604.3537<br>604.5879<br>545.9979<br>558.2789 | 71.8795<br>71.6899<br>71.5416<br>71.4227  | 260 .8275<br>259.8913<br>258.9974<br>258.1534<br>257.3721<br>285.7312<br>281.5576<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.285<br>271.28 | 0.4132<br>0.2172  | 0.4454<br>4454<br>127<br>0.4454<br>177<br>0.4454<br>177<br>0.4454<br>177<br>177<br>177<br>177<br>177<br>177<br>177<br>177<br>177<br>17 | 00000000000000000000000000000000000000         | -0.0025<br>-0.0008<br>-0.0005<br>-0.0030            | 0.10652<br>0.08909<br>0.09799<br>0.17491<br>0.32966<br>0.54125<br>-0.24104<br>-0.21000<br>-0.16077           | 0.16607<br>0.16307<br>0.14818<br>0.12738<br>0.16509<br>0.28039<br>0.45775<br>-0.17859<br>-0.14671                                      | -0.12254<br>-0.11832<br>-0.08919<br>-0.20011  | 0.07119<br>0.08147<br>0.18465<br>0.30683<br>-0.13985<br>-0.08886  |
| 545.9979<br>558.2789<br>568.4683<br>576.6404<br>583.0624                         | 87.8095<br>86.4119<br>84.4716<br>82.3940  | 285.7315<br>283.8071<br>281.5576<br>279.2153   | 73.4446<br>54.4843<br>38.9483   | 0.0753<br>0.1576<br>0.2228<br>0.2751   | 0.9972<br>0.9875<br>0.9749<br>0.9614           | 0.0027<br>0.0007<br>-0.0004<br>-0.0011              |  | -0.03565   | -0.59843<br>-0.62976<br>-0.52160<br>-0.39841  | -0.03966  |
| 588.0476<br>588.0476<br>591.9005<br>594.8911<br>597.2169<br>599.0347             | 78.6725<br>77.1863<br>75.9527<br>74.9438  | 274.7340<br>272.7085<br>270.8543<br>269.1462   | 27.1005<br>18.5956<br>12.7402<br>8.7402<br>6.0902<br>4.2967<br>3.0632<br>2.2134<br>1.6091 | 0.3481<br>0.3730<br>0.3899<br>0.4051   | 0.9375<br>0.9278<br>0.9209<br>0.9143           | -0.0016<br>-0.0019<br>-0.0018<br>-0.0014<br>-0.0031 | 0.01450<br>0.07741<br>0.09414<br>0.10728<br>0.12867  | 0.06624<br>0.14700<br>0.18657<br>0.19384   | -0.29816<br>-0.27747<br>-0.25423<br>-0.23816  | 0.07129<br>0.14123<br>0.20379<br>0.22507  |
| 600.4702<br>601.5916<br>602.4689   | 71. 6839<br>71. 54127<br>87. 4229<br>87. 84116<br>84. 4716<br>84. 4716<br>84. 4716<br>84. 4716<br>85. 4725<br>86. 18523<br>77. 71. 1188<br>74. 1188<br>77. 41. 1188<br>77. 41. 1188<br>77. 41. 1188<br>77. 77. 74. 1188 | 270.8543<br>269.1462<br>267.5738<br>266.1349<br>264.7893<br>263.5220<br>262.3412<br>261.2309<br>260.1771<br>259.1851   |   | 0.4182<br>0.4255<br>0.4315<br>0.4416   | 0.9083<br>0.9050<br>0.9021<br>0.8972           | -0.0034<br>-0.0025<br>-0.0009<br>0.0006             | 0.12867<br>0.15333<br>0.16832<br>0.16394<br>0.13669  | 0.106624<br>0.14700<br>0.18657<br>0.19384<br>0.20227<br>0.20886<br>0.20627<br>0.18595  | -0.264344<br>-0.26404381<br>-0.2242881<br>-0.224284720<br>-0.19841074<br>-0.116477542<br>-0.116477542<br>-0.116477542<br>-0.11643760<br>-0.122883167<br>-0.052291843167<br>-0.052291843167<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.0523143387<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.052314347<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>-0.0523147<br>- | 0.00848<br>0.03319<br>0.07129<br>0.14123<br>0.20379<br>0.22507<br>0.23252<br>0.232524<br>0.19557<br>0.13504 |
| 603.1636<br>603.6887<br>604.0620<br>604.3241                                     | 72.1425<br>71.8774<br>71.6892<br>71.5574  | 261.2309<br>261.1771<br>259.1851   | 0.8459<br>0.5977<br>0.4037<br>0.2521  | 0.4518<br>0.4548<br>0.4515<br>0.4455   | 0.8921<br>0.8906<br>0.8922<br>0.8953           | 0.0007<br>0.0024<br>0.0004<br>-0.0006               | 0.07361<br>-0.00163<br>0.00271<br>0.12624  | 0.13815<br>0.06507<br>0.03966<br>0.12126   | -0.14319<br>-0.13472<br>-0.11623<br>-0.12376  | 0.13504<br>0.03398<br>-0.03274<br>0.01636   |

| \$\\ \text{385.89} \\ \text{385.89} \\ \text{2523} \\ \text{409} \\ \text{401.498} | 6888071117807114488181154483533398730330578747944477246887110535551029111651804977017633830993448455556666776838309333333333333333333333333333333333 | Z 8.316548 8.8445 7.75 1.0 | 3622268857771456884499411839114983703362261418244214290555239944644872223333447355666780114704839472116887693521394446448699411688769352139444556667801765347727278874211688769496511765346486994118222333346926117653487486921771344690176534311696711941109431699496511371588156994965177135487487885459986925611761344862217715880986077543333343333133434445556678011470481333343333333333333333333333333333333 | F15640   | EZ 0.0000 0.0043 -0.0021 0.0000 | 107   | 0996485827252515552001112611525007931149917614990444413086938767577611482525151552001112611525007931149917611999761149904444130869184710708838767521175250793114991794993809937809937809937809931749111111107388359794993877550420798999899994443380006862899979449338775568766978999987433996741111111000000001111111111111111111111 | 7760403461373713504034460723933347454565604113935737454443537137454556660555555555555555555555555555555                   | 44949494949494949494949494949494949494   |
|--|--|--|---|--|---|---|---|---|--|
| 404.0038<br>405.9469<br>407.0182<br>408.1889<br>409.4938<br>410.9776<br>412.7001<br>417.1840<br>420.2157<br>424.0309<br>428.8910<br>435.1098<br>442.3069<br>463.2139<br>463.2139<br>467.9909<br>487.9909<br>500.6825   | 83.68391<br>83.68391<br>83.77553<br>83.77553<br>83.95441<br>84.0444<br>84.12839<br>84.6701<br>84.2829<br>84.6701<br>85.26515                         | 211. 0129<br>210. 4280<br>209. 1625<br>209. 1625<br>208. 4753<br>207. 7406<br>206. 1007<br>205. 2127<br>204. 3197<br>203. 4874<br>202. 4929<br>202. 9665<br>201. 7259<br>201. 3643<br>201. 3643<br>201. 3643   | 4.9541<br>5.26098<br>6.1104<br>7.6112<br>10.1414<br>11.9879<br>17.4160<br>20.8025   | 0.0349 -0.9994<br>0.0349 -0.9994 | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000  | 0.11061<br>0.09667<br>0.08184<br>0.06602<br>0.04919<br>0.03030<br>0.00962<br>-0.01523<br>-0.07843<br>-0.15979<br>-0.15979<br>-0.19471 | 0.21580<br>0.2096<br>0.18499<br>0.14831<br>0.12596<br>0.07047<br>-0.00821<br>-0.05961<br>-0.12470<br>-0.12697<br>-0.22677<br>-0.218090<br>-0.131670<br>-0.0131670   | 0.29247<br>0.28407<br>0.26157<br>0.24820<br>0.223313<br>0.217766<br>0.159346<br>0.06420<br>0.07545<br>0.165678<br>0.09395 | 0.05213<br>0.03164<br>0.00989<br>-0.01377<br>-0.03722<br>-0.06788<br>-0.13481<br>-0.17392<br>-0.22354<br>-0.27925<br>-0.39609<br>-0.38575<br>-0.317493<br>-0.21448<br>-0.12998<br>-0.09261 |

| 1902   82,3632   229,6515   14,8949   0.1614   -0.966 | 4 | 0.458.400.00.00.00.00.00.00.00.00.00.00.00.00 |
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| 398. 83699 83. 4034 399. 64599 83. 4634 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 4001.599503 83. 46937 83. 77644 411.598613 83. 844.25562 844.23.086637 844.23.086637 845.244375 846.359508 856.38595 846.359508 857. 3767 8767 8767 8767 8767 8767 8767 8767  | 0294488271991500744950835447725585949494949494949494949494949494949494   | 3268512833468672486183360228511188445145222695003332152511844991034622133129055119603000377725162973255871772763723881347553344688553342686533209929615033388515039929618335588433342686533346865213396929615033388609999183355884446866778876533446885513209929662133988099991833558844468865213391868099991833558844468865133099226511475526621339880999918335588444688651830992497868189766818398680999999999999999999999999999999999 | 0.0349<br>0.0349<br>0.1564<br>0.1564<br>0.0588<br>0.0319<br>0.0349                        | 44444444444444444444444444444444444444 | 0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.000000 | 979484867748494900146654747238625637474648677487464877466774733164747667748749669112701467476748749669112701467476748749669112701467476748749669112701467476748749669112701467476748749669112701466747747674747476747476747474767474747674 | 243463743828355844198620574771386565533966544443088795946775477453618835894442008509244091448363687343828355446772886985655339665795575188773850914969687685687653351833882554457389257728869865650234575135153388565548745738577286698767524714448384445516027749485623731487494443887457315338874577285767285200170744448384445165027948485625339184874572868768767848788786785899999999999999999999999999999 | 288.0646652442684439399973265424440361974203715660<br>288.0646737494717371440361974203715699<br>4254187416524261301574961610035157394515739451573945157794791737141737147916761610037155816100<br>425418741610161003161093157101444006991737157171717171717171717171717171717171 | 928144807688416783302370558042268861785209353844457148113145915002855844479330794795273788892953309188292927259567834277053844497699295688947248142693282778573143521442693285584442737487699668894384427748876986783484481110025789787878787878787878787878787878787878 |
|---|--|--|---|--|---|--|---|--|--|
| \$17.3247 87.5412<br>\$28.9700 87.9477<br>\$79.9281<br>\$377.9478 81.1434<br>\$385.5228 82.3567<br>\$391.6507 83.1044<br>\$395.6917 83.294<br>\$400.4211 83.4587<br>\$400.4211 83.4587<br>\$400.4211 83.5953<br>\$400.4211 83.5953<br>\$400.7285 83.5953<br>\$400.7285 83.5953<br>\$400.7285 83.5592<br>\$400.7285 83.5592<br>\$400.7285 83.5593<br>\$400.7285 83.5593<br>\$400.7 | 252, 2655<br>253, 5655<br>253, 5655<br>253, 5259<br>253, 13229<br>254, 2277<br>254, 289738<br>2553, 289738<br>2553, 2332<br>2551, 1553<br>2551, 1553<br>2551, 2551<br>2551, 2551<br>2551<br>2551, 2551<br>2551<br>2551<br>2551<br>2551<br>2551<br>2551<br>2551 | 20.4991313<br>4.8495825<br>4.8495825<br>4.8495825<br>1.468601<br>1.6886491<br>2.7425<br>2.33   | 0.16689<br>0.053149<br>0.033449<br>0.033449<br>0.033449<br>0.033449<br>0.03349<br>0.03349 | -0.9990                                | -0.0039<br>0.0093<br>-0.0027<br>0.0000<br>0.0000<br>0.0000  | 0.51637<br>0.7698439<br>0.79725<br>0.87127<br>0.87127<br>0.893072<br>0.9329097<br>0.9329095<br>0.92227<br>0.932227<br>0.884464   | 0.58894<br>0.752469<br>0.863614<br>0.93988<br>0.939671<br>0.97470<br>1.987470<br>0.98742<br>0.98742<br>0.982958   | 0.3518937<br>0.5581286<br>0.5581286<br>0.5581392<br>0.65859275<br>0.6531159<br>0.791089<br>0.81741   | 0.84055<br>0.89203<br>0.94170<br>0.99369   |

| Х  | Υ  | Z  | AREA<br>2.0040 -0.9991   | EY                                      | -0.0427   | CP1   | CP2  | CP3  | CP4   |
|--|--|--|--|---|---|---|--|--|---|
| X<br>405.3627<br>405.4151<br>405.5196<br>405.7002        | Y<br>68.3502<br>68.6229<br>68.9078<br>69.2071  | 256.6330<br>255.8682<br>255.0304<br>254.1197   | 2.0040 -0.9991<br>2.1784 -0.9958<br>2.3421 -0.9882<br>2.5313 -0.9729   | 0.0003<br>0.0003<br>0.0003<br>0.0003    | -0.0912<br>-0.1533  | CP1<br>0.87821<br>0.90643<br>0.97447<br>1.00884                         | CP2<br>0.81626<br>0.85152<br>0.91426<br>0.95750                      | CP3<br>0.32751<br>0.35412<br>0.44290<br>0.51480                            | 1.03576<br>1.03521<br>1.06347<br>1.05756                |
| 405.9826<br>406.3811<br>406.9232                         | 69.5202<br>69.8480<br>70.1897  | 253.1314<br>252.0550   | 2.7522 -0.9497<br>3.0166 -0.9262<br>3.3258 -0.8894   | 0.0003<br>0.0004<br>0.0004              | -0.2313<br>-0.3133<br>-0.3770<br>-0.4571                                | 1.04340   | 1.00180<br>1.02412<br>1.03072  | 0.51480<br>0.61451<br>0.68364<br>0.75723                                   | 1.04255<br>1.00534<br>0.93977                           |
| 407.6604<br>408.6321<br>409.9026                         | 70.5430<br>70.9074   | 250.8836<br>249.6075<br>248.2084<br>246.6731   | 3 7462 -0 8439   | 0.0003<br>0.0005<br>0.0004              | -0.5364<br>-0.5988<br>-0.6690   | 1.03617<br>0.98369<br>0.90726<br>0.77809<br>0.62775                     | 1.00539  | 0.80334<br>0.82563<br>0.81493<br>0.77644                                   | 0.84417<br>0.73199<br>0.56990                           |
| 411.5677<br>413.7437<br>416.5834                         | 71.2810<br>71.6579<br>72.0315<br>72.3918   | 246.6731<br>244.9804<br>243.1127<br>241.0548   | 6.7887 -0.6212<br>8.1897 -0.5581   | 0.0005<br>0.0003<br>0.0003              | -0.7270<br>-0.7837<br>-0.8298<br>-0.8712                                | 0.43201   | 0.86456<br>0.74748<br>0.58584<br>0.40643<br>0.20456                  | 0.69465  | 0.39721<br>0.18898<br>-0.02322                          |
| 420.2834<br>425.0878<br>431.2674                         | 72.0315<br>72.3918<br>72.7203<br>73.0332<br>73.3093<br>73.4744   | 241.0548<br>238.7950<br>236.3467<br>233.7420   | 10.0340 -0.4909<br>12.3812 -0.4239<br>15.3780 -0.3594<br>19.1986 -0.2934   | 0.0002<br>0.0001<br>0.0005              | -0.9057   | -0.18703<br>-0.37155  | 0.20456<br>-0.00458<br>-0.22338<br>-0.41257                          | 0.45646<br>0.32451<br>0.18794<br>0.05644<br>-0.03504                       | -0.23951<br>-0.44904<br>-0.65557                        |
| 439.1040<br>448.8271<br>460.5381                         | 73.3740  | 231.0654<br>228.4477<br>226.0655   | 19.1986 -0.2934<br>23.9767 -0.2320<br>29.5519 -0.1713<br>35.3008 -0.1129<br>40.2924 -0.0565  | 0.0004<br>0.0002<br>0.0002<br>0.0002    | -0.9560<br>-0.9727<br>-0.9852<br>-0.9936                                | -0.49983<br>-0.50661<br>-0.41628  | -0.41257<br>-0.50072<br>-0.44028<br>-0.29744<br>-0.20423             | -0.03504<br>-0.08845   | -0.81457<br>-0.83621<br>-0.60795<br>-0.29345            |
| 474.1279<br>489.2098<br>505.1216<br>521.0338             | 73.1399<br>73.1260<br>73.1260  | 224.1383<br>222.8721<br>222.4322<br>223.4836   | 40.2924 -0.0565<br>43.4589 0.0005<br>44.2437 0.0569  | 0.0005<br>0.0007<br>0.0008              | -0.9984<br>-1.0000<br>-0.9984   | -0.41628<br>-0.30907<br>-0.25027<br>-0.23342<br>-0.22367                | -0.20423<br>-0.18799<br>-0.19272                                     | -0.03504<br>-0.08845<br>-0.12504<br>-0.16984<br>-0.24158<br>-0.34147       | -0.19773<br>-0.18773<br>-0.19229                        |
| 535.8879<br>405.3636<br>405.4171                         | 73.2362<br>73.1399<br>73.1841<br>73.2614<br>71.0516<br>71.2776<br>71.2776<br>71.7631<br>72.0242<br>72.2382<br>72.3882<br>72.38827<br>73.5084 | 238.7950<br>238.7950<br>233.7420<br>233.7420<br>233.7420<br>233.40657<br>226.0655<br>222.4321<br>222.4326<br>222.4326<br>222.4326<br>222.4326<br>223.555.00657<br>253.0859<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.0058<br>255.00 | 43.4589 0.0005<br>44.2437 0.0569<br>41.0368 0.0991<br>1.9527 -0.9991<br>2.1177 -0.9957   | -0.0024<br>0.0003<br>0.0003             | -0.9936<br>-0.0430<br>-0.0923   | 0.91702<br>0.93175  | -0.16633<br>0.86632<br>0.89196                                       | 0.36882  | -0.14900<br>1.05616<br>1.03731                          |
| 405.5241<br>405.7089<br>405.9969                         | 71.5141<br>71.7631<br>72.0242  | 255.0065<br>254.0867<br>253.0899   |  | 0.0003<br>0.0003<br>0.0002              | -0.1552<br>-0.2345<br>-0.3159   | 0.98851<br>1.00511<br>1.02484   | 0.94420<br>0.97298<br>1.00267  | 0.47648  | 1.05554<br>1.03090<br>1.00503                           |
| 406.4022<br>406.9530<br>407.6997                         | 72.2982<br>72.5847<br>72.8822  | 252.0058<br>250.8281<br>249.5471   | 2.4569 -0.9721<br>2.4568 -0.9488<br>2.9222 -0.9249<br>3.2180 -0.8872<br>3.6203 -0.8421<br>4.0838 -0.7984   | 0.0003<br>0.0003<br>0.0002              | -0.3802<br>-0.4613<br>-0.5393   | 1.01418<br>0.98633<br>0.92719   | 1.00902<br>1.00183<br>0.96758  | 0.67879<br>0.67879<br>0.773990<br>0.77404<br>0.79013<br>0.77655<br>0.74604 | 0.95590<br>0.88323<br>0.78936<br>0.68023                |
| 408.6813<br>409.9626<br>411.6384<br>413.8247             | 73.8318  | 248.1444<br>246.6076<br>244.9151<br>243.0492   | 4.7025 -0.7409<br>5.5025 -0.6843   | 0.0004<br>0.0002<br>0.0004<br>0.0001    | -0.6021<br>-0.6716<br>-0.7292<br>-0.7853                                | 0.84807<br>0.72585<br>0.58655<br>0.40702                                | 1.00183<br>0.96758<br>0.91426<br>0.82379<br>0.71300<br>0.56277       | 0.77655<br>0.74003<br>0.66640  | 0.53038<br>0.37150<br>0.17882                           |
| 416.6741   | 74.4741<br>74.7721<br>75.0652<br>75.3381<br>75.5322  | 240.9945   | 6.5304 -0.6192<br>7.8702 -0.5562<br>9.6333 -0.4892<br>11.8797 -0.4226  | 0.0002<br>0.0001<br>0.0001              | -0.8310<br>-0.8721<br>-0.9063   | 0.40702<br>0.21705<br>0.01219<br>-0.18437                               | 0.20117  | 0.66640<br>0.57299<br>0.44925<br>0.31919<br>0.18754<br>0.0348              | -0.02133<br>-0.23191<br>-0.44271                        |
| 425.1965<br>431.3851<br>439.2307<br>448.9631             | 75.3381<br>75.5322<br>75.6137  | 236.2961<br>233.6977<br>231.0275<br>228.4158   | 11.8797 -0.4226<br>14.7419 -0.3581<br>18.3878 -0.2926<br>22.9429 -0.2312   | 0.0004<br>0.0004<br>0.0002              | -0.9337<br>-0.9562<br>-0.9729   | -0.35909<br>-0.48105  | -0.21530<br>-0.39774<br>-0.48737                                     |  | -0.64314<br>-0.79764<br>-0.82025                        |
| 460.6845<br>474.2858<br>489.3799                         | 75.6137<br>75.6125<br>75.6044<br>75.6435   | 226.0404<br>224.1208<br>222.8637   | 28.2528 -0.1706<br>33.7179 -0.1123<br>38.4482 -0.0558  | 0.0001<br>0.0002<br>0.0004              | -0.9853<br>-0.9937<br>-0.9984<br>-1.0000<br>-0.9983                     | -0.41102<br>-0.30941<br>-0.25171<br>-0.23432<br>-0.22365<br>-0.18707    | -0.43338<br>-0.29679<br>-0.20506<br>-0.18795                         | -0.09158<br>-0.12766<br>-0.16999<br>-0.23958<br>-0.33805                   | -0.60035<br>-0.29367<br>-0.19834<br>-0.18780            |
| 505.3040<br>521.2278<br>535.6483<br>405.3644             | 75.7577<br>75.9320<br>76.0985<br>73.5979   | 231 . 0275<br>228 . 4158<br>226 . 0404<br>224 . 1208<br>222 . 4341<br>222 . 8968<br>224 . 0924<br>256 . 6239<br>255 . 8399   | 7.8702 -0.5562<br>9.6333 -0.4892<br>11.8797 -0.4226<br>14.7419 -0.3526<br>22.9429 -0.2312<br>28.2528 -0.1706<br>33.7179 -0.1123<br>38.4482 -0.0512<br>41.4294 0.0012<br>42.1357 0.0576<br>36.5859 0.1123<br>1.8285 -0.9956<br>1.9787 -0.9956 | 0.0006<br>0.0007<br>-0.0024<br>0.0003   | -0.9937   | -0.22365<br>-0.18707<br>0.94559   | -0.18795<br>-0.19170<br>-0.16628<br>0.90226<br>0.92357               | -0.33805<br>-0.42470<br>0.38534<br>0.41704                                 | -0.19153<br>-0.14990<br>1.08638                         |
| 405.4191<br>405.5284<br>405.7172                         | 76.0985<br>73.5979<br>73.7797<br>73.9704<br>74.1717  | 255.8399<br>254.9839<br>254.0556   | 1.9787 -0.9956<br>2.1243 -0.9876<br>2.2921 -0.9714   | 0.0003<br>0.0003<br>0.0003              | -0.0932<br>-0.1569<br>-0.2374   | 0.94559<br>0.95714<br>1.01422<br>1.02727                                | 0.97525  | 0.49582<br>0.55855   | 1.05309<br>1.07027<br>1.03470                           |
| 406.0105<br>406.4220<br>406.9810                         | 74.1717<br>74.3835<br>74.6066<br>74.8408<br>75.0853  | 254.9839<br>254.9556<br>253.0508<br>251.9593<br>250.7758   | 2.2921 -0.9714<br>2.4872 -0.9480<br>2.7207 -0.9237<br>2.9924 -0.8852   | 0.0002<br>0.0002<br>0.0002              | -0.3183<br>-0.3832<br>-0.4652<br>-0.5419                                | 1.04442<br>1.02818<br>0.99492<br>0.93177                                | 1.02509<br>1.02535<br>1.01178<br>0.97235<br>0.91533                  | 0.64206<br>0.69713<br>0.75565<br>0.78638                                   | 1.00576<br>0.95071<br>0.87437<br>0.77951                |
| 407.7366<br>408.7278<br>410.0192<br>411.7050             | 75.3403<br>75.6053   | 248.0842<br>246.5460   | 2.9924 -0.8852<br>3.3624 -0.8405<br>3.7884 -0.7962<br>4.3566 -0.7388<br>5.0910 -0.6822   | 0.0001<br>0.0002<br>0.0001<br>0.0002    | -0.6051<br>-0.6740<br>-0.7312   | 0.85001<br>0.72817<br>0.59049   | 0.82352  | 0.69713<br>0.75565<br>0.78638<br>0.80084<br>0.78498                        | 0.66970<br>0.52267<br>0.36737                           |
| 413.9009<br>416.7595<br>420.4773<br>425.2988<br>431.4957 | 75.8778<br>76.1551<br>76.4326<br>76.7010   | 244.8537<br>242.9895<br>240.9377<br>238.6868   | 6.0349 -0.6173<br>7.2642 -0.5545<br>8.8807 -0.4877   | 0.0000<br>0.0001<br>0.0000              | -0.7867<br>-0.8322<br>-0.8730   | 0.41374<br>0.22489<br>0.01885   | 0.56451<br>0.39723<br>0.20338  | 0.58137  | 0.17871<br>-0.01987<br>-0.23203                         |
| 439.3495   | 76.9744<br>77.2430<br>77.4628  | 236.2486<br>233.6560<br>230.9919   | 10.9409 -0.4215<br>13.5586 -0.3569<br>16.8870 -0.2919  | 0.0000<br>0.0003<br>0.0003              | -0.9068<br>-0.9341<br>-0.9565   | -0.17994<br>-0.35492<br>-0.47766<br>-0.49081                            | -0.00408<br>-0.21406<br>-0.39627<br>-0.48719                         | 0.32485<br>0.19220<br>0.06433<br>-0.03003                                  | -0.44453<br>-0.64419<br>-0.79714<br>-0.81977            |
| 449.0905<br>460.8216<br>474.4334<br>489.5387             | 77.6092<br>77.7078<br>77.8181<br>77.9802   | 228.3858<br>226.0170<br>224.1045<br>222.8558<br>222.4359   | 25.8603 -0.1700<br>30.8048 -0.1117   | 0.0001<br>0.0001<br>0.0001<br>0.0004    | -0.9731<br>-0.9854<br>-0.9937<br>-0.9985                                | -0.41112<br>-0.30977  | -0.43383<br>-0.29709<br>-0.20553                                     | -0.09299<br>-0.13613   | -0.60022<br>-0.29288<br>-0.19892                        |
| 505.4739<br>521.4085<br>535.4261                         | 77.9802<br>78.2102<br>78.4889<br>78.7337<br>75.9108<br>76.0522   | 222.4359<br>222.9091<br>224.0609   | 37.6956 0.0018<br>38.2588 0.0583<br>31.0933 0.1118   | 0.0006<br>0.0007<br>-0.0025             | -1.0000<br>-0.9983<br>-0.9937   | -0.25233<br>-0.23518<br>-0.22552<br>-0.18857                            | -0.18888<br>-0.19332<br>-0.16844                                     | -0.18203<br>-0.25153<br>-0.35079<br>-0.43607                               | -0.18926<br>-0.19365<br>-0.15225                        |
| 405.3652<br>405.4209<br>405.5322                         | 76.2009  | 222.4399<br>224.90609<br>224.66199<br>256.6199<br>255.8274<br>254.9633   | 1.6496 -0.9991<br>1.7817 -0.9956<br>1.9113 -0.9874   | 0.0002<br>0.0002<br>0.0002<br>0.0002    | -0.0434<br>-0.0941<br>-0.1585   | 0.97258<br>0.97979<br>1.03787<br>1.04743<br>1.06202                     | 0.93939<br>0.95600<br>1.00877<br>1.02878                             | 0.40834<br>0.43995<br>0.51734<br>0.57901                                   | 1.07655   |
| 405.7246<br>406.0228<br>406.4399<br>407.0064             | 76.3585<br>76.5252<br>76.7016<br>76.8879   | 253.0153<br>251.9172<br>250.7283   | 2.0606 -0.9708<br>2.2338 -0.9473<br>2.4411 -0.9226<br>2.6819 -0.8834   | 0.0001<br>0.0002<br>0.0001              | -0.2400<br>-0.3204<br>-0.3858<br>-0.4686                                | 1.04082   | 1.05065  | 0.65825<br>0.71044<br>0.76415  | 1.01216<br>0.95031<br>0.86871                           |
| 407.7702<br>408.7699<br>410.0705                         | 77.0838<br>77.2899<br>77.5063  | 254.0274<br>253.0153<br>255.0153<br>2550.7283<br>249.4286<br>246.4901<br>244.79384<br>242.9384<br>243.86394  | 3.0097 -0.8390<br>3.3870 -0.7941<br>3.8898 -0.7368   | 0.0000<br>0.0001<br>0.0000              | -0.6077<br>-0.6761  | 0.93305<br>0.84641<br>0.72216<br>0.58393                                | 0.97906<br>0.91630<br>0.82055<br>0.70806                             | 0.79005<br>0.80097<br>0.78211<br>0.74294                                   | 0.77077<br>0.65802<br>0.51087<br>0.35674                |
| 411.7653<br>413.9699<br>416.8367                         | 77.7319<br>77.9657<br>78.2054<br>78.4458   | 244.7980<br>242.9354<br>240.8864<br>238.6394   | 4.5393 -0.6802<br>5.3739 -0.6156<br>6.4599 -0.5529<br>7.8862 -0.4863   | 0.0001<br>-0.0001<br>-0.0001<br>-0.0001 | -0.7881<br>-0.8332<br>-0.8738   | 0.40919<br>0.22273<br>0.01876<br>-0.17872<br>-0.35050                   | 0.55990<br>0.39391<br>0.20127  | 0.66991<br>0.58006<br>0.46093<br>0.33043<br>0.19447                        | -0.02317<br>-0.23337                                    |
| 420.5623<br>425.3911<br>431.5955<br>439.4566             | 76.7016<br>76.8879<br>77.0838<br>77.2899<br>77.5063<br>77.7319<br>77.9657<br>78.2054<br>78.4458<br>78.6999<br>78.9626<br>79.2030             | 236.2056<br>233.6184<br>230.9598   | 9.7034 -0.4204<br>12.0045 -0.3559<br>14.9226 -0.2912<br>18.5480 -0.2298<br>22.7467 -0.1694   | -0.0001<br>0.0002<br>0.0003             | -0.73301<br>-0.83328<br>-0.837348<br>-0.93467<br>-0.997355<br>-0.998385 |   | 0.55990<br>0.39391<br>0.20127<br>-0.00512<br>-0.21236<br>-0.39084    | 0.05000  | -0.44507<br>-0.64226<br>-0.79112                        |
| 449.2051<br>460.9447<br>474.5657                         | 79.5896<br>79.8019   | 228.3589<br>225.9959<br>224.0898   | 18.5480 -0.2298<br>22.7467 -0.1694<br>27.0228 -0.1112  | 0.0001<br>0.0000<br>0.0001<br>0.0003    | -0.9732<br>-0.9855<br>-0.9938<br>-0.9985                                | -0.484336<br>-0.40834<br>-0.30938<br>-0.25261<br>-0.235331<br>-0.225304 | -0.48158<br>-0.43063<br>-0.29645<br>-0.20559<br>-0.18877<br>-0.19297 | -0.04411<br>-0.10969<br>-0.14926   | -0.81300<br>-0.59688<br>-0.29214<br>-0.19887            |
| 489.6806<br>505.6255<br>521.5692<br>535.2295             | 80.3970<br>80.7629   | 238.6394<br>236.2056<br>233.6184<br>233.6184<br>238.9588<br>228.35889<br>224.0898<br>222.4377<br>222.4377<br>222.4377<br>222.45889<br>225.66164<br>255.8164  | 6.4599 -0.5529<br>7.8862 -0.4863<br>9.7034 -0.4204<br>12.0045 -0.3559<br>14.9226 -0.2912<br>18.5480 -0.2298<br>22.7467 -0.1112<br>30.6621 -0.1112<br>32.8710 0.00589<br>25.3759 0.1113<br>11.4391 -0.9990                                    | 0.0006<br>0.0006<br>-0.0025             | -1.0000<br>-0.9983<br>-0.9938   | -0.23531<br>-0.22530<br>-0.18994  | -0.18877<br>-0.19297<br>-0.16892                                     | -0.14926<br>-0.19015<br>-0.25564<br>-0.35430<br>-0.44290                   | -0.19887<br>-0.18930<br>-0.19341<br>-0.15377<br>1.15183 |
| 535.2295<br>405.3659<br>405.4224<br>405.5356<br>405.7312 | 81.0719<br>77.9421<br>78.0476<br>78.1590<br>78.2779  | 256.6164<br>255.8164<br>254.9453   | 1.4391 -0.9955<br>1.5515 -0.9955<br>1.6633 -0.9872<br>1.7918 -0.9702<br>1.9407 -0.9466   | 0.0003<br>0.0003<br>0.0002<br>0.0002    | -0.0436<br>-0.0949  | -0.18994<br>0.97687<br>0.98149<br>1.03959<br>1.04829                    | -0.16892<br>0.96051<br>0.97438<br>1.02783<br>1.04605                 | -0.44290<br>0.43317<br>0.46180<br>0.54009<br>0.60073                       | 1.15183<br>1.09606<br>1.10970<br>1.05548                |
| 405.7312<br>406.0335                                     | 78.2779<br>78.4045   | 254.9453<br>254.0026<br>252.9841   | 1.7918 <b>-</b> 0.9702<br>1.9407 <b>-</b> 0.9466   | 0.0002<br>0.0001                        | -0.1598<br>-0.2422<br>-0.3223   | 1.04829<br>1.06259  | 1.04605  | 0.67821  | 1.02013   |

| 77 67 4 413 25 7 4 4 4 4 5 8 5 8 7 2 7 6 16 16 30 6 5 3 8 9 2 2 2 4 2 2 2 9 6 3 3 9 4 4 1 2 1 3 2 5 7 4 4 4 4 5 8 5 8 7 2 7 6 16 16 3 0 6 5 3 8 9 2 2 2 4 2 2 2 9 6 3 3 9 4 4 1 2 1 3 5 5 5 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | 429452848263225523061599115888666098888138254555525804144392271275567991777488866667429784578888888888888888888888888888888888   | 261171120440268857727884110567260588834606916093295688633020891588211930976497991887745029596080888484884688515727788411056672600568857572788411056672600588854609160997335688931110094764979918877727884110567726005688593777428851555337774288515555493774400563584997633985521277555556899988337774288419986789878789899883397774288515555499978374840986635849976978988999883307742885155555499978374409866789899886330885477755888899988633088547775588889998863308854777558888999886379997838464998697897898999886797898899988679978989998867997898999889998899988999889998999  | 82303906317326931455218074318648358889384848443568657441772698829776602474499369494914666013373369349568449936949456444993698523732768949456449936949499499499499499499499499499499499499 | 6886441514624963397184488040818555871284883718839741484565598455999337038539659659931983745655844155949633977465583419855577665584455949639955766558445594963995778857476655844559496599869598695986959869598695 | 10.000010<br>0.000010<br>0.000010<br>0.000010<br>0.000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000010<br>0.0000000000 | 1621062144899469502888591880190592902205795796022939086645161368005454168896029044669198849897088762688060201887451678498447466353889899399496467474678984767898994964747467898797588980833456677887035788999994964747467898999999496478774678899999496478787678787678787678787678787678787678787678787678787987879878778787878 | \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   | 611104460990588072395186914602813595733329914747239944923566704677794831171194295832776693858812682920628972395837295686666292584793451632595747398316712087716822513499747794958317295837829518565656583473588347149666676474713439316712087716822513479496666662959447996960665813144446689747479688977971794971 | 0.456129007<br>44881210007<br>44881210007<br>44881210007<br>44881210007<br>44881210007<br>44881210007<br>44881210007<br>44881210007<br>4488121000000000000000000000000000000000 | 0.046028444951293763386776388677639856637639805076383867867850852385246576388674763867659518524852763866992847695185248524765051852485247650518524852476505185248524765051852476   |
|---|--|---|---|--|---|---|---|--|---|--|
| 461.2714<br>474.9142<br>490.0513  | 83.6420<br>84.687345<br>84.20845<br>84.5845<br>85.5058345<br>85.5058345<br>86.502720<br>88.505834<br>87.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>88.20273<br>8 | 236. 0882<br>233. 5169<br>233. 5169<br>233. 5169<br>228. 2880<br>224. 9400<br>224. 9512<br>222. 4414<br>222. 94414<br>222. 9620<br>256. 6073<br>255. 7879<br>254. 8986<br>253. 7879<br>254. 2760<br>249. 2760<br>2760<br>2760<br>2760<br>2760<br>2760<br>2760<br>2760 |   | 0.1096<br>-0.9990<br>-0.9953<br>-0.9868<br>-0.9450<br>-0.9191<br>-0.8778<br>-0.8343  | 0.0001<br>-0.0001<br>0.0002<br>0.0002<br>0.0004<br>-0.0003<br>-0.0002<br>0.0002<br>0.0000<br>-0.0003<br>-0.0003<br>-0.0003<br>-0.0003<br>-0.0003<br>-0.0003   | -0.9940<br>-0.99441<br>-0.09682<br>-0.16478<br>-0.322799<br>-0.51539<br>-0.66827<br>-0.7392   | -0.46486<br>-0.47980<br>-0.40593<br>-0.251423<br>-0.234237<br>-0.1233259<br>0.83793<br>0.956674<br>0.96667<br>0.966664<br>0.78086<br>0.78086<br>0.53909 | -0.19323<br>-0.17195<br>0.97755<br>0.92918<br>0.96975<br>0.98781<br>1.00387<br>0.99665<br>0.97401<br>0.92996   | 0.03395<br>-0.05541<br>-0.13415<br>-0.13415<br>-0.13415<br>-0.24026<br>-0.345079<br>0.491049<br>0.597465<br>0.73493<br>0.850335<br>0.82843<br>0.77633<br>0.85030<br>0.50200     | -0.78340<br>-0.780207<br>-0.59681<br>-0.198681<br>-0.195768<br>-1.108032<br>-1.108032<br>-0.195768<br>-1.108032<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.195768<br>-0.19576 |

| 431.9033<br>439.7852 | 84.2672<br>84.5426 | 233.5024<br>230.8612 | 4.3425             | -0.3526<br>-0.2891 | 0.0000             | -0.9358<br>-0.9573 | -0.35402<br>-0.46614 | -0.22230<br>-0.39203 | 0.41800<br>0.31698   | -0.64469<br>-0.78338 |
|----------------------|--------------------|----------------------|--------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|----------------------|
| 449.5545             | 84.8790            | 228.2767             | 6.5311             | -0.2279            | -0.0001            | -0.9737            | -0.47950             | -0.47906             | 0.20889              | -0.79956             |
| 461.3170<br>474.9622 | 85.2812<br>85.7480 | 225.9322<br>224.0459 | 7.8740<br>9.1723   | -0.1676<br>-0.1096 | -0.0001<br>-0.0001 | -0.9858<br>-0.9940 | -0.40507<br>-0.30703 | -0.42808<br>-0.29480 | 0.10150<br>0.00584   | -0.58769<br>-0.28540 |
| 490.1018             | 86.2683            | 222.8277             | 10.1818            | -0.0529            | 0.0002             | -0.9986            | -0.25077             | -0.20459             | -0.08472             | -0.19587             |
| 506.0705<br>522.0361 | 86.8192<br>87.3718 | 222.4420<br>222.9518 | 10.6623<br>10.5329 | 0.0039             | 0.0004             | -1.0000<br>-0.9982 | -0.23358<br>-0.22520 | -0.18813<br>-0.19229 | -0.18706<br>-0.31280 | -0.18752<br>-0.19211 |
| 534.6664             | 87.8086            | 223.9528             | 6.4714             | 0.1093             | -0.0027            | -0.9940            | -0.19222             | -0.17107             | -0.43914             | -0.15685             |

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| 8111162042112712342772132982908330734562890538445887694455816887694458879945617746513322883111662042112712132982906288312890538421688769445887720734237889891333333334440445515377851005557537889149444444444444444444444444444444444 | 69281579837555221318849594569380629333200449626444590422466613762882779967082833051369972333991714499115443334122015315136972352186597235218623777549647889477377734314807769627082833446444881149911544933415155666666677777899013582136911313344614667859602477163191313344614678596024771631913133446146785960247716319131582131313444448145151666678813131313444444818181818181818181818181 | 94440000014099777777379997914008866588001880260997996637866270331006449957155026611210667110290442280014765833199906884435312000714009078809777777737999791400886658888909511857863989095146713278866588890951185783216865888909511857893886658899511857893889095118578938890951467713278866588995131210771858999844280000000000000000000000000000000 | 238188626166759986255994971237071987120008596829391744186066111152269393969812144164435856621097182565968210971821565998736172774888883244098285685187747108973617277488888774827354888932440982856851877471089736172774728888873480599104955625152712859564586257472063939549877485865741878471089766174778565741785657417878787878787878787878787878787878787 | 4 5 T T T T T T T T T T T T T T T T T T | 0.9994<br>0.9994<br>0.9994<br>0.9994 | 0.0000<br>0.0031<br>0.0005<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000 | 0551325256666625231194235708833947498277936221417027663666666666666666666666666666666666 | 76445191186906622211888473119119179775844442777188936566641538383636669839755744747905696641553987557447975788444427777188444427718844442771884444277188444427718844442771884444277718884444277188844442771888444427718884444277188844442771888444427718884444277188844442771888444427718884444277188844442771888444427718884444277188844442771888444427718884444277188844442771888844447844449771888844444784444977188884444449771888844444497718888444444977188884444449771888844444497718888444444977188884444444444 | 27441629906089922484859512267675459024438813788055304624499353114492598082711153683518979377617874627474707885969962 874816299060899224848595112676767508038058304624393134149259808276128442000758027596962754585969962754585969962754585969962753754585969962753754585969962753754585969962753754585969962753757777778827859699627537577777778827859699627537577777778827859699627537577777778827859699627537577777778827859699627537577777778827859699627537585969977667777777788278596996275375777777788278596996275375777777778827859699627537577777777882785969962753757777777882785969962753757777777788278596996275377777777788278596996275375777777778827859699627537577777777882785969962753757777777788278596996275375777777778827882785979909090909090909090909090909090909090 | $\begin{array}{c} 0.098167986361447151522323449932772981660324515221660324575723333775723333279579533902466779887799816799866646877957445119232372579533902795795339027957953391379797979797979797979797979797979797$ |
|---|---|---|---|---|--------------------------------------|--|--|---|--|---|
|---|---|---|---|---|--------------------------------------|--|--|---|--|---|

| 267734437444352918443339967565444529185633996765533656897544523903368688563445244524452445244524452445244524525675778845234452466333486765533784525633333333333333333333333333333333333 | 2441032491349134913491491345914468445538333334455446895288883333344554588888888888888888888888   | 267 . 08199<br>267 . 08199<br>267 . 08464<br>2666 . 95833<br>267 . 07921<br>267 . 09505<br>266 . 79921<br>267 . 09505<br>268 . 3893<br>269 . 4923<br>269 . 4923<br>277 . 31304<br>277 . 2331<br>277 . 2331<br>2 | 98117523345107331620928339060088448553655577<br>9887900335552339021598455135737188555577829<br>9298008775455233390221594655519537188553655577829<br>929870866715519803887958519537409621588779029<br>92728664422222333444578911369369011198975536510<br>927286547537445578911369369011198975536510  | 0.1107499<br>0.11074999<br>0.110733344999999999999999999999999999999999 | 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| 40234556161659388675888443375846661117774190732244444446837133884935883936898786019124469222514484666117774419073323333333333333333333333333333333333                                   | \$85052773022329663896620113311258831177.9994893951281877528777604473949924010288911834405133333444455556677789948888888888888888888888888888888 | 01101010101010101010101010101010101010  | \$19438009597533320064415111264152286430047851723399330804665311447342504699147380095975335678629417034443080465372184793425046991479327319937345678611447034443080147859158597328751899095933114695555231846930959333080465331146935046891047851585973189393937331934456667990113695689098065314830775689932395933308046653111655553114693509689174793773976 | 48999999999999999999999999999999999999                                  | -0.9994444444444444444444444444444444444   | 0.0000   | 0 11958316<br>0 110505499<br>10 11050549<br>10 110  | \$307724444687725850206531777037850808077703778037850669785850820761272444941999350665978508080770000000000000000000000000000 | -0.024775505<br>-0.0346795<br>-0.0346795<br>-0.05775505<br>-0.014660133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.01460133<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0.0146013<br>-0   | 0.000000000000000000000000000000000000  |

| 0471733572918562833345749646756738872311937925457488662908768881818428459155886624689646896659669924457456663157256663536665966992455741188786662696696679333339901223775866631533666316679679378566646896679333339977816663177678888866247978781878788886624787888898788887845878188788888662478788888944444444444444444444444444444 | 437 93406030036599902740062816305957848823610001639205917530884677065825200641991542131209369601302777738696593784861222253622203365995027406281630595784861222255626277406582555555566677753695957848959578489595784895957848959578489595784895957848959578489577788895012335746385595784895784895784895787889597778889501235774638553957848957878889501235777888950123357746385787878887878888888888888888888888888 | 2845.1927.8553.00.60.97.441.13.99.97.57.13.88.97.97.97.855.30.88.97.57.97.97.97.97.97.97.97.97.97.97.97.97.97 | 7144442017045783112383077557199018742296656717474880681577768803038562262424102220775314443099156033175486441509355222188697845140983365794862571985579486625717474880687747697587576876778457768767767767767767767767767767767767767 | 94944444444444444444444444444444444444   | 0.000000000000000000000000000000000000 | 0.03334444350033444443302344444334444444444              | $\begin{array}{c} 357717799366827987911373811873811873811873812714781278127817979797817979797817979797817979797979$ | -0.04754<br>-0.04968<br>-0.05018<br>-0.05613<br>-0.07359 | 0.33197<br>0.33503<br>0.19240<br>0.15876<br>0.12587<br>0.11802<br>0.09832<br>0.08286 |
|---|---|---|---|--|--|--|---|--|--|
| 403.3594<br>404.1411<br>404.9788<br>405.8877<br>406.8873  | 83.5613<br>83.5886<br>83.6179<br>83.6496<br>83.6845   | 302.2257<br>302.6721<br>303.1743<br>303.7169<br>304.2938  | 3.7842<br>4.0581<br>4.3528<br>4.7026<br>5.1277  | 0.0349 -0.9994<br>0.0349 -0.9994<br>0.0349 -0.9994<br>0.0349 -0.9994<br>0.0349 -0.9994 | 0.0000                                 | -0.10596<br>-0.11393<br>-0.12310<br>-0.13270<br>-0.14308 | -0.05102  | -0.06489<br>-0.07359<br>-0.08376<br>-0.09141<br>-0.09835 | 0.08286  |

| 40124495439914384269423148426444562444862444862444899933333333333333333333333333333333 | 88888888888888888888888888888888888888 | 5.56488<br>5.765856<br>5.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.0484544<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.048454<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6.04845426<br>6. | 464491227116561289953071800071265990314334914565644884454883445085559188659714271483375510929796689721800079314333337551092979668921631042659903143333375510929796689216310426599037746976483143499155134376076565488897147704812232333322 | 94949999999999999999999999999999999999 | 94444444444444444444444444444444444444 | 0.0000 | -0.16698<br>-0.16698<br>-0.16697424<br>-0.166974266776<br>-0.166974266776<br>-0.1695172296826776<br>-0.1695172296826776<br>-0.1695172296826776<br>-0.16951766916776<br>-0.16951766916776<br>-0.16951766916776<br>-0.16951766916776<br>-0.16951766916776<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.16951767676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.16951767676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.16951767676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517676<br>-0.169517 | -0.1689860776824613394661133946611339466113394661133946611339466113394661133946611339466113394661133946611339466113394661133949611131111111111 | -0.1240389<br>-0.1140389<br>-0.1140389<br>-0.1140389<br>-0.116035939010<br>-0.116035939010<br>-0.116035939010<br>-0.116035939010<br>-0.116035939010<br>-0.116035939010<br>-0.117038244057348593918<br>-0.1203825655945590<br>-0.120382566559457382600<br>-0.12038256659188897373824767797<br>-0.12038256659188897373824767797<br>-0.120382669189000<br>-0.114349826000<br>-0.11434581640<br>-0.11434581640<br>-0.11434581640<br>-0.116036868918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.116036891869<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.1160368918689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0.11603689<br>-0. | 0015078234788740<br>-00150782343788740<br>-00150782343788740<br>-001507823437887440<br>-001507823437887440<br>-001507823437887440<br>-001507823437867340<br>-00150782343865993401<br>-00150782343865993401<br>-0015078234988378787<br>-001507823488378787878787878787878787878787878787 |
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| 6.99982674810862441023324502324246137024434402982667833326241731445339355235932461170855554064440444444444444444444444444444 | 8951112308237771798442283933611116239546615555555557777777777766666666677777777 | 80082307790613307032523667153996001055589752224644796596969898771119393333333444669999355334994355534499455599999779325797777777792557999997557901119833593445699993558899723222222222222222222222222222222222 | 21156286992069125039895115684700001117;159980955103655275665275665513115423054876627524314400156525555756995764885549605755632440707551855555557442315457662752443071567547676472754764275855255557573990839339962476876575315563244707568525555747676572573139960757576532447075667672774704768762753847667537563244707566767277470476471374567657676774704768767676767676767676767676767676767676 | 1566670772944510277294481027729879480993938494519780990386963997425434259374151074254302727272727885344510277298794269772098797425843441102772948594514519744446670671104725436350773852457274550370987999999999999999999999999999999999 | EY0033344450600000000000000000000000000000 | 6699726533198901100114944049832023537184285889355031109611291011067259534765032332379991340507999118830766353387633155659972665357839083345505715317535455253578939089349661423 Z4955317539627872603537899909949557839908939578999099496545778839357839908934961423 Z4955317539627726035378990984956457788393578990994951237745515515515515545255358983999999999999999999999999999999 | \$\begin{align*} 338.35540.89826666.2838.27214.8451.29218.805.774.006.2557.88445.284.296.266.2821.2921.8921.2921.8921.2921.2921.2921 | -0.31960 | $\begin{array}{c} 3000000000000000000000000000000000000$ | 366111600388337748861611761018861303561637367816161761761822661761822661761822661761826665708987852618878785261887878786176187866570878526188787878617618786657887878787878787878787878787878787 |
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| 100.0000000000000000000000000000000000 |
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| 431.8942<br>439.77444<br>449.5437<br>461.3077<br>474.9562<br>490.1019<br>506.0779<br>522.0494<br>534.6558 | 83.8956<br>84.1431<br>84.4612<br>84.8603<br>85.3456<br>85.9121<br>86.5356<br>87.7018 | 280.4897<br>283.1315<br>285.7140<br>288.0574<br>289.9468<br>291.1619<br>291.5500<br>291.0500<br>290.0508 | 9.8846<br>12.6537<br>15.7588<br>18.79315<br>21.4295<br>19.86117<br>8.4641 | -0.3525<br>-0.2893<br>-0.2273<br>-0.1680<br>-0.1097<br>-0.0524<br>0.0031<br>0.0602<br>0.1101 | 0.0002<br>-0.0003<br>-0.0002<br>0.0005<br>0.0008<br>0.0002<br>0.0000<br>0.0002<br>-0.0009 | 0.9358<br>0.9572<br>0.9738<br>0.9858<br>0.9940<br>0.9980<br>1.0000<br>0.9982<br>0.9939 | -0.61572<br>-0.58158<br>-0.53251<br>-0.487816<br>-0.44596<br>-0.42486<br>-0.32369 | -0.63418<br>-0.62035<br>-0.54587<br>-0.45307<br>-0.38792<br>-0.37375<br>-0.34188 | -0.49572<br>-0.47060<br>-0.45379<br>-0.43151<br>-0.42680<br>-0.41632<br>-0.413646 | -0.47530<br>-0.53034<br>-0.53198<br>-0.48675<br>-0.40117<br>-0.37717<br>-0.34195<br>-0.26182 |
|---|--|--|---|--|---|--|---|--|---|--|
|---|--|--|---|--|---|--|---|--|---|--|

| 7700778316678009448899655550755044142188475557250096543584416769996544906545750008623844121888473333333333333333333333333333333333 | 2667598862388200676763930409144835517746376355761999045587799116717377224413364578555556666614427883636269944469978789824888990011111111111111111111111111111111 | 9009511088720118891080252110977176563299970088007448311421121227818321011474533110707559108899371853116489112112278831164891121122788311648911121227811646311648911121227811646311648911121227811646116489111212278116489112122781164891112121227811648911212278116489111212122781164891112121227811648911121212278116489112121227811648911121212278116489111212122781164891112121227811648911121212121212121212121212121212121212 | EX 33494999999999999999999999999999999999 | 00140444444444444444444444444444444444 | 0.0000 | -0.19661<br>-0.18366<br>-0.18366<br>-0.17224<br>-0.16648<br>-0.16648<br>-0.16483<br>-0.14347<br>-0.13882<br>-0.12318<br>-0.12318<br>-0.11066<br>-0.1045<br>-0.1045<br>-0.1045<br>-0.10715<br>-0.13704<br>-0.13704<br>-0.13704 | -0.21160 -0.20244 -0.19311 -0.18371 -0.17446 -0.16555 -0.15006 -0.14357 -0.13761 -0.13767 -0.12737 -0.12737 -0.12132 -0.09604 -0.08675 -0.08875 -0.098845 -0.098845 -0.098845 -0.098845 -0.098845 -0.09885 | 63449277749286148651778293279873048804931788101880936150099775885244111528468477781935252837972743938761077749286141154443172382135655545443317254854949317782931110188093615334111018809361534934579548529379727439353554852937972743935365925585237111015445777334994574593557854852088876022822121111111111111111111111111111111 | 21222277551111791585452655512257399456893910946692016114875851132811159443871422450000374955521213359936649877295384372196378457343524754526554579758873352957542151111979595121111111111111111111111111 |
|--|--|---|---|--|--------|---|--|---|--|
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plate top upper

| 401.8430<br>402.6134<br>403.4548<br>404.3754<br>405.3890<br>406.5112<br>407.7584<br>409.1499   | 86.0099<br>86.0368<br>86.0684<br>86.1338<br>86.1765<br>86.27651  | 284.8721<br>285.7938<br>285.7936<br>287.6244<br>288.76244<br>289.88577<br>291.0704   | 4.7747 -0.0348<br>5.0881 -0.0349<br>5.6154 -0.0349<br>5.9145 -0.0349<br>6.2603 -0.0349<br>6.6590 -0.0349<br>7.1281 -0.0349  | 0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994                       | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000                                   | -0.17842<br>-0.17062<br>-0.16300<br>-0.15613<br>-0.14997<br>-0.13998<br>-0.13615   | -0.22072<br>-0.21053<br>-0.19879<br>-0.18862<br>-0.17372<br>-0.16827<br>-0.16327                                       | -0.25725<br>-0.24072<br>-0.23335<br>-0.22586<br>-0.21317<br>-0.20774<br>-0.20266<br>-0.19779   | -0.3573<br>-0.3186<br>-0.2931<br>-0.2724<br>-0.2556<br>-0.2415<br>-0.2307<br>-0.2129                     |
|--|--|--|---|--|--|--|--|--|--|
| 410.7086<br>412.4692<br>416.7503<br>419.4204<br>416.7503<br>419.4204<br>421.360000<br>431.36233<br>445.5433<br>445.5433<br>445.966           | 366 .216515<br>866 .216515<br>866 .38605<br>866 .38505<br>866 .45305<br>866 .62351<br>866 .67351<br>877 .25375<br>877 .25375<br>877 .888071<br>887 .388071 | 291.2654<br>293.4654<br>294.6721<br>295.8888<br>297.1172<br>298.3542<br>298.3542<br>299.3630<br>300.7614<br>301.8650<br>302.9150<br>303.9026<br>304.7698 | 7.16737<br>8.3360 -0.0349<br>9.1555 -0.0349<br>10.1907 -0.0349<br>11.5407 -0.0349<br>13.3357 -0.0349<br>18.5738 -0.0349<br>21.9979 -0.0349<br>25.3263 -0.0349<br>27.8127 -0.0349<br>27.8127 -0.0349       | 0.9994<br>0.9994<br>0.9994<br>0.99994<br>0.99994<br>0.9994<br>0.9994           | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000               | -0.13288<br>-0.13206<br>-0.12529<br>-0.12529<br>-0.12529<br>-0.11906<br>-0.11692<br>-0.11452<br>-0.11099<br>-0.11030   | -0.15570<br>-0.15577<br>-0.15577<br>-0.14725<br>-0.14725<br>-0.13722<br>-0.13181<br>-0.12914<br>-0.11103<br>-0.10317   | -0.18808<br>-0.18271<br>-0.17692<br>-0.17019<br>-0.16274<br>-0.15449<br>-0.14598<br>-0.13751   | -0.2048<br>-0.1968<br>-0.1884<br>-0.1872<br>-0.1639<br>-0.1572<br>-0.1452<br>-0.1224                     |
| 479.84028<br>493.4028<br>518.3573<br>375.6508<br>378.9165<br>382.5759<br>387.2053<br>391.9248<br>395.3233                                    | 89.2074<br>89.6741<br>90.0787<br>83.9426<br>84.5457<br>84.9936<br>85.3814<br>85.6560   | 305.4486<br>305.90762<br>306.1462<br>306.0228<br>282.7774<br>282.0323<br>283.8144<br>287.8926  | 29.2710 -0.0349<br>28.5897 -0.0349<br>27.15555 -0.0349<br>22.3965 -0.2206<br>16.5077 -0.1419<br>15.9038 -0.1009<br>23.6447 -0.0689<br>18.2029 -0.0400<br>14.6130 -0.0337<br>11.426 -0.0337                | 0.9994<br>0.9994<br>0.99994<br>0.9752<br>0.9898<br>0.9949<br>0.99976<br>0.9994 | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0191<br>-0.0101<br>-0.0123<br>-0.0043<br>-0.0001<br>0.0000 | -0.110751<br>-0.1133175<br>-0.1133175<br>-0.129347018<br>-0.129347018<br>-0.3227318<br>-0.22244628<br>-0.22244628<br>-0.2203489<br>-0.1876777                  | -0.08548<br>-0.086649<br>-0.11771<br>-0.24713<br>-0.37379<br>-0.47988<br>-0.50649<br>-0.55343                          | -0.12937<br>-0.15846<br>-0.10475<br>-0.56236   | -0.1081<br>-0.1017<br>-0.0102<br>-0.1102<br>-0.4519<br>-0.5514<br>-0.6517<br>-0.6346                     |
| 397.8106<br>399.6617<br>401.0715<br>402.0475<br>402.8255<br>403.6859<br>404.6210<br>405.6338<br>406.7346<br>407.9380<br>409.2644<br>411.7396 | 85. 8691<br>85. 99338<br>86. 99330<br>86. 004742<br>86. 10469<br>86. 14223<br>86. 12228<br>86. 2228<br>86. 23206<br>86. 37783                              | 290.4652<br>290.9408<br>291.3785<br>291.8649<br>292.5320<br>293.3218<br>294.1862<br>295.09240  | 5.1678 -0.0348<br>7.1986 -0.0349<br>4.3435 -0.0349<br>4.7989 -0.0349<br>5.1186 -0.0349<br>5.3895 -0.0349<br>5.6615 -0.0349<br>6.3278 -0.0349<br>6.3278 -0.0349<br>7.3147 -0.0349                          | 0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994             | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000               | -0.16802<br>-0.16012<br>-0.15292<br>-0.14656<br>-0.14103   | -0.37641<br>-0.30181<br>-0.230181<br>-0.27910<br>-0.26503<br>-0.22051<br>-0.23386<br>-0.220841<br>-0.19729<br>-0.18702 | -0.37010<br>-0.48913<br>-0.415768<br>-0.339752<br>-0.3313386<br>-0.27679<br>-0.262332<br>-0.241501<br>-0.22490<br>-0.21835<br>-0.207012  | -0.5994<br>-0.5348<br>-0.4720<br>-0.4291<br>-0.3965<br>-0.3673   |
| 412.3958<br>414.2859<br>416.4285<br>422.1193<br>430.7009<br>436.8547<br>436.88547<br>454.31554   | 86 .4444<br>86 .5100<br>86 .7177<br>86 .8504<br>87 .2325<br>87 .2325<br>87 .58423<br>88 .2366  | 296.9742<br>297.9448<br>298.9416<br>299.9675<br>301.0194<br>303.1294<br>304.0892<br>304.9332<br>305.7109<br>306.4414<br>307.0892                         | 8.0051 -0.0349<br>8.8839 -0.0349<br>10.0027 -0.0349<br>11.4637 -0.0349<br>15.8370 -0.0349<br>18.8247 -0.0349<br>22.2761 -0.0349<br>25.5767 -0.0349  | 0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994   | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000               | -0.13254<br>-0.12945<br>-0.12708<br>-0.12508<br>-0.12353<br>-0.12204<br>-0.11945   | -0.16956<br>-0.16236<br>-0.15578<br>-0.14931<br>-0.14213<br>-0.12449<br>-0.11450<br>-0.10627<br>-0.10627<br>-0.09514   | -0.224833<br>-0.2212711<br>-0.2212711<br>-0.290202<br>-0.196334<br>-0.1857880<br>-0.1857880<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.1188786<br>-0.118878 | -0.31191<br>-0.21961<br>-0.22587<br>-0.22386<br>-0.19853<br>-0.15286<br>-0.15286<br>-0.11528<br>-0.11114 |
| 478.1623<br>491.38495<br>504.4695<br>515.9168<br>378.6068<br>381.5224<br>384.7188<br>388.8224<br>388.8224<br>398.0424<br>398.02241           | 88.156938<br>89.19938<br>89.9935<br>84.49606<br>85.2346<br>85.70017<br>85.8873<br>85.9417<br>85.8077<br>85.9917<br>86.0177                                 | 307.6079<br>307.9770<br>308.2251<br>308.3160<br>286.8519<br>286.6092<br>288.4181<br>291.02645<br>293.02645<br>294.9059                                   | 29.5940 -0.0349<br>28.8233 -0.0349<br>27.2559 -0.0349<br>23.1434 -0.0349<br>15.7942 -0.1887<br>13.8058 -0.1165<br>12.7238 -0.0526<br>14.9729 -0.0348<br>14.9729 -0.0348                                   | 0.9994<br>0.9994<br>0.9994<br>0.99817<br>0.9932<br>0.9986<br>0.99986<br>0.9994 | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0252<br>-0.0064<br>-0.0036<br>0.0004<br>0.0001             | -0.11910<br>-0.12191<br>-0.12548<br>-0.13724<br>-0.15283<br>-0.1886<br>-0.24701<br>-0.26188<br>-0.32107<br>-0.32480<br>-0.30304<br>-0.26257                    | -0.10142<br>-0.11090<br>-0.13651<br>-0.37397<br>-0.39451<br>-0.50137<br>-0.52059                                       | -0.64556<br>-0.36173<br>-0.55636<br>-0.43568   | -0.1062<br>-0.1087<br>-0.1119<br>-0.1270<br>-0.5920<br>-0.6548<br>-0.6588                                |
| 399.8861<br>401.1944<br>402.1253<br>402.8753<br>403.6976<br>404.5806<br>405.5261<br>406.5452<br>407.6545<br>408.8782                         | 85.9416<br>85.9872<br>86.0197<br>86.0460<br>86.1055<br>86.11741<br>86.12129<br>86.21256<br>86.3234   | 296.5047<br>296.7093<br>296.9389<br>297.3489<br>297.8808<br>298.5031<br>299.1789<br>299.8896   | 7.4329 -0.0348<br>5.9741 -0.0349<br>3.7083 -0.0350<br>4.1510 -0.0349<br>4.4692 -0.0349<br>5.0170 -0.0349<br>5.0170 -0.0349<br>5.7155 -0.0349<br>6.2083 -0.0349  | 0.9994<br>0.9994<br>0.99994<br>0.99994<br>0.99994<br>0.99994<br>0.99994        | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000                         | -0.24701<br>-0.26188<br>-0.32107<br>-0.303049<br>-0.26259<br>-0.223511<br>-0.223513<br>-0.21869<br>-0.21169<br>-0.19430<br>-0.176749<br>-0.167919              | -0.48923<br>-0.41631<br>-0.37930<br>-0.36286<br>-0.35275<br>-0.34005<br>-0.29524<br>-0.29524<br>-0.26366<br>-0.24660   | -0.39435<br>-0.37214<br>-0.34860<br>-0.328441<br>-0.29340<br>-0.278568<br>-0.25588<br>-0.24697<br>-0.23166<br>-0.23166<br>-0.221904  | -0.6120<br>-0.5807<br>-0.5579<br>-0.5214<br>-0.4978<br>-0.4736<br>-0.4481                                |
| 410 .2462<br>411 .78753<br>413 .67533<br>415 .67538<br>421 .196818<br>421 .96818<br>423 .91080<br>443 .71080<br>443 .71080                   | 86.4199<br>86.4199<br>86.5797<br>86.6857<br>86.88175<br>86.1998<br>87.47197  | 301 3997<br>302 2071<br>303 0593<br>303 9575<br>304 8921<br>305 7483<br>307 75202<br>308 1167<br>308 1141  | 6.8191 -0.0349<br>7.6131 -0.0349<br>8.6267 -0.0349<br>9.9012 -0.0349<br>11.5528 -0.0349<br>13.7291 -0.0349<br>16.3941 -0.0349<br>23.0933 -0.0349<br>23.0933 -0.0349<br>23.9833 -0.0349<br>28.9863 -0.0349 | 0.9994<br>0.99994<br>0.99994<br>0.99994<br>0.99994<br>0.99994                  | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000                         | -0.15332<br>-0.14623<br>-0.13486<br>-0.13486<br>-0.12571<br>-0.12571<br>-0.12318<br>-0.11580<br>-0.11580   | -0.22896<br>-0.21217<br>-0.19680<br>-0.18385<br>-0.17322<br>-0.165807<br>-0.14888<br>-0.12032<br>-0.12032              | -0.21305<br>-0.20734<br>-0.20063<br>-0.19345<br>-0.18349<br>-0.17186   | -0.3898<br>-0.35813<br>-0.32947<br>-0.22452<br>-0.22159<br>-0.18947<br>-0.1490                           |
| 476.5780<br>489.5138<br>502.3777<br>513.5960<br>381.8565<br>384.8531<br>386.9702<br>390.3600   | 88.6198<br>89.0716<br>89.5208<br>89.9124<br>84.2310<br>85.4241<br>85.5885  | 309 . 1411<br>309 . 8979<br>310 . 1622<br>310 . 6270<br>291 . 5580<br>291 . 5580<br>291 . 3855<br>296 . 1344<br>298 . 8113                               | 30.4696 -0.0349<br>30.7875 -0.0349<br>30.0206 -0.0349<br>28.2416 -0.0349<br>14.0480 -0.1535<br>10.8134 -0.0900<br>9.9903 -0.0533<br>16.8342 -0.0409<br>13.2402 -0.0369                                    | 0.9994<br>99994<br>0.999994<br>0.9999999<br>0.9999999<br>0.9999994<br>0.999994 | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0284<br>-0.0015<br>-0.0032<br>-0.0032<br>-0.0001           | -0.12571<br>-0.12371<br>-0.12329<br>-0.11341<br>-0.11341<br>-0.11369<br>-0.137941<br>-0.32725<br>-0.34642<br>-0.226471<br>-0.2264118<br>-0.223706<br>-0.223706 | -0.09566<br>-0.086185<br>-0.09209<br>-0.12296<br>-0.50980<br>-0.38158<br>-0.48999<br>-0.48999                          | -0.14869<br>-0.128644<br>-0.11475<br>-0.1147762<br>-0.1147762<br>-0.08747389<br>-0.452599<br>-0.452599<br>-0.41459   | -0.11313<br>-0.11031<br>-0.10118<br>-0.66848<br>-0.65333<br>-0.65332<br>-0.6398                          |
| 396. 4663<br>398. 3756<br>401. 0072<br>401. 8571<br>402. 85374<br>403. 27238<br>404. 8915<br>405. 8000                                       | 85.8224<br>85.8888<br>85.9807<br>86.0342<br>86.0342<br>86.0598<br>86.1163<br>86.1183   | 299.8113<br>300.8134<br>301.3616<br>301.6180<br>301.8628<br>302.6722<br>303.1745<br>303.7170<br>304.2939   | 10.0865 -0.0347<br>7.7032 -0.0349<br>6.0283 -0.0349<br>3.1273 -0.0359<br>3.4923 -0.0349<br>3.7840 -0.0349<br>4.0584 -0.0349<br>4.3528 -0.0349<br>4.7026 -0.0359<br>5.1275 -0.0349                         | 0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994<br>0.9994   | 0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000               | -0.23230<br>-0.22706<br>-0.22387<br>-0.22082<br>-0.21838<br>-0.21478<br>-0.21099<br>-0.20657<br>-0.20135<br>-0.19529   | -0.40766<br>-0.39418<br>-0.38574<br>-0.37488<br>-0.36880<br>-0.36280<br>-0.35483<br>-0.34537<br>-0.33364               | -0.41456<br>-0.40280<br>-0.39482<br>-0.37927<br>-0.36498<br>-0.35026<br>-0.32179<br>-0.30676<br>-0.29056   | -0.5057<br>-0.5944<br>-0.5813<br>-0.5734<br>-0.5766<br>-0.5597<br>-0.55386<br>-0.5233                    |

| 407.01.65.67.19.90.19.10 | 866.066.66.66.67.77.88.89.99.55.55.55.55.55.55.55.55.55.55.55.55 | 7694488134471203307447850055512261885468468473484747811111111111111111111111111111 | 5.3924 -0.03499 6.33436 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 9.3499 -0.03499 228.10456 -0.03499 228.10456 -0.03499 228.10456 -0.03499 228.10456 -0.03499 228.10456 -0.03499 228.10456 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.10466 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 228.1046 -0.03499 238.2046 -0.03499 248.2046 -0.03499 258.2046 -0.03499 268.2046 -0.03499 268.2046 -0.03499 278.2046 -0.03499 288.2046 -0.03499 288.2046 -0.03499 288.2046 -0.03499 298.2046 -0.03499 | 44444444444444444444444444444444444444 | 0.0000 -0.0000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.000000 -0.00000 -0.00000 -0.00000 -0.00000 -0.00000 -0.0000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.000000 -0.00000000 | 180176870798176870798176870798111144688706332667991111111111111111111111111111111111 | -0.339036 -0.273333 -0.273333 -0.2753045 -0.1763358 -0.1223648 -0.1123935 -0.112393 | -0.255.7845.9846.805.446.805.478.819.00.39.92.35.8882.59.26.38.89.26.38.29.29.29.29.29.29.29.29.29.29.29.29.29. | -0.5084201 -0.41584 -0.375843 -0.3258105 -0.215181 -0.1153978 -0.1153978 -0.112598 |
|--|--|--|---|--|---|--|---|---|--|
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## plate top middle

| X Y Z AREA EX EY EZ CT 405.3226 86.1315 256.6226 0.0673 -0.0350 0.9994 0.0000 -0.17 405.4666 86.1365 255.8881 0.2252 -0.0352 0.9994 0.0000 -0.17 405.6702 86.1437 254.9938 0.4183 -0.0354 0.9994 -0.0001 -0.16   | 260 -0.20386 -0.28334 -0.24986  |
|--|---|
| 406.3498 86.1675 253.1275 0.6557 -0.0354 0.9994 -0.0002 -0.16406.8607 86.1853 252.0926 1.3240 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 252.09866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9866 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407.5187 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0352 0.9994 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0002 -0.16407 86.2083 250.9868 1.7937 -0.0002 -0.16407 86.2083 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250.9868 1.7937 86.2082 250. | 504 -0.20194 -0.27672 -0.24897<br>258 -0.19991 -0.27586 -0.24501<br>983 -0.19698 -0.27493 -0.23951  |
| 408.3685       86.2380       249.7983       2.4386       -0.0352       0.9994       -0.0002       -0.194488         409.4488       86.2758       248.5099       3.2743       -0.0351       0.9994       -0.0002       -0.11410.8227         410.8227       86.3238       247.1126       4.4444       -0.0351       0.9994       -0.0002       -0.14412.8609         412.5809       86.3852       245.8851       6.0869       -0.0350       0.9994       -0.0002       -0.14412.8609         414.8376       86.4640       243.9096       8.4081       -0.0350       0.9994       -0.0002       -0.13412.8609  | 277 -0.18765 -0.27252 -0.22349<br>837 -0.18118 -0.27084 -0.21312<br>323 -0.17336 -0.26881 -0.20120  |
| 417.7434 86.5654 242.0702 11.7110 -0.0350 0.9994 -0.0002 -0.13 421.4933 86.6963 240.0563 16.4138 -0.0350 0.9994 -0.0001 -0.13 426.3295 86.8652 237.8755 22.9986 -0.0349 0.9994 -0.0001 -0.13 432.5228 87.0815 235.5584 31.9279 -0.0349 0.9994 -0.0001 -0.13  | 024 -0.15314 -0.26267 -0.17310<br>204 -0.14059 -0.25805 -0.15756<br>255 -0.12634 -0.25220 -0.14154  |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 024 -0.08039 -0.23145 -0.09576<br>195 -0.06866 -0.23037 -0.08248<br>614 -0.05906 -0.23495 -0.06937<br>163 -0.05024 -0.24111 -0.05573  |
| 506.0024 89.6478 225.5831 100.6889 -0.0348 0.9994 0.0000 -0.06<br>521.8241 90.1998 226.0465 96.9680 -0.0349 0.9994 0.0000 -0.07<br>534.4461 90.6406 226.9516 58.0071 -0.0349 0.9994 0.0000 -0.13<br>405.3966 86.1341 256.6768 0.0617 -0.0357 0.9994 -0.0002 -0.17  | 590 -0.04888 -0.25232 -0.05034<br>812 -0.05343 -0.28506 -0.04956<br>388 -0.10273 -0.31196 -0.08827<br>387 -0.20224 -0.27989 -0.24494  |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 585 -0.19949 -0.27051 -0.24816<br>325 -0.19667 -0.26900 -0.24328<br>047 -0.19368 -0.26775 -0.23823<br>752 -0.19015 -0.26678 -0.23218  |
| 408.4175 86.2402 251.9944 1.7146 -0.0352 0.9994 -0.0002 -0.15<br>409.3712 86.2736 251.0377 2.3480 -0.0351 0.9994 -0.0002 -0.15<br>410.5444 86.3146 250.0057 3.1598 -0.0351 0.9994 -0.0002 -0.14<br>411.9960 86.3653 248.8924 4.3025 -0.0351 0.9994 -0.0002 -0.14   | 447 -0.18611 -0.26579 -0.22523<br>098 -0.18114 -0.26464 -0.21696<br>710 -0.17540 -0.26326 -0.20764<br>279 -0.16875 -0.26151 -0.19726  |
| 413.8160     86.4288     247.6797     5.9087     -0.0350     0.9994     -0.0002     -0.13       416.1173     86.5092     246.3521     8.1801     -0.0350     0.9994     -0.0002     -0.13       419.0483     86.6115     244.8960     11.4145     -0.0349     0.9994     -0.0002     -0.12       422.8006     86.7425     243.3026     16.0152     -0.0349     0.9994     -0.0001     -0.11       427.6116     86.9104     241.5780     22.4636     -0.0349     0.9994     -0.0001     -0.11   | 231 -0.15231 -0.25646 -0.17342<br>593 -0.14236 -0.25279 -0.16032<br>857 -0.13122 -0.24798 -0.14683<br>022 -0.11894 -0.24217 -0.13335  |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 264 -0.08073 -0.22286 -0.09592<br>536 -0.07055 -0.22070 -0.08415  |
| 490.4893 89.1060 232.1379 95.2637 -0.0349 0.9994 0.0000 -0.06<br>506.0052 89.6478 231.8648 98.8480 -0.0349 0.9994 0.0000 -0.07<br>521.5672 90.1909 232.2335 95.4925 -0.0349 0.9994 0.0000 -0.08<br>534.2612 90.6341 232.9581 60.1690 -0.0349 0.9994 0.0000 -0.14   | 629 -0.05334 -0.22931 -0.05897<br>215 -0.05313 -0.24326 -0.05424<br>172 -0.05516 -0.26879 -0.05169<br>192 -0.10711 -0.29291 -0.09130  |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 262 -0.19323 -0.26913 -0.23945<br>949 -0.18929 -0.26665 -0.23316<br>629 -0.18534 -0.26420 -0.22697  |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 980 -0.17638 -0.26037 -0.21246<br>626 -0.17111 -0.25844 -0.20403<br>245 -0.16532 -0.25636 -0.19488  |
| 414.7802 86.4631 249.9737 5.6827 -0.0350 0.9994 -0.0002 -0.13<br>417.1206 86.5448 248.9786 7.9091 -0.0350 0.9994 -0.0002 -0.12<br>420.0753 86.6479 247.8873 11.0929 -0.0349 0.9994 -0.0002 -0.12<br>423.8329 86.7790 246.6936 15.6316 -0.0349 0.9994 -0.0001 -0.11   | 362 -0.15162 -0.25118 -0.17433<br>331 -0.14347 -0.24762 -0.16296<br>236 -0.13447 -0.24344 -0.15121<br>553 -0.12449 -0.23805 -0.13928  |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$   | 929 -0.10197 -0.22411 -0.11604<br>042 -0.09008 -0.21653 -0.10487<br>233 -0.07906 -0.21017 -0.09420<br>534 -0.06898 -0.20646 -0.08282  |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$   | 704 -0.05190 -0.21223 -0.05861<br>704 -0.05190 -0.21223 -0.05861<br>897 -0.05257 -0.22873 -0.05456<br>845 -0.05560 -0.25710 -0.05276  |
| 405.5012 86.1378 256.8372 0.0516 -0.0352 0.9994 0.0003 -0.17<br>406.0033 86.1556 256.4998 0.1732 -0.0353 0.9994 0.0001 -0.16<br>406.5608 86.1753 256.4392 0.3245 -0.0355 0.9994 -0.0002 -0.15  | 131 -0.19593 -0.27633 -0.23539<br>196 -0.19373 -0.26712 -0.23960<br>1997 -0.18854 -0.26355 -0.23401   |
| 407.3896         86.2917         255.3566         0.7635         -0.0353         0.9994         -0.0002         -0.15           408.7145         86.25214         254.9292         1.0734         -0.0352         0.9994         -0.0002         -0.14           409.6497         86.2842         254.4776         1.4745         -0.0352         0.9994         -0.0002         -0.14           410.7474         86.3623         253.9969         2.0441         -0.0351         0.9994         -0.0002         -0.14           412.0509         86.3683         253.4791         2.7871         -0.0350         0.9994         -0.0002         -0.13           413.6158         86.4230         252.9215         3.8448         -0.0350         0.9994         -0.0002         -0.13           417.9022         86.5726         251.6520         7.5025         -0.0349         0.9994         -0.0002         -0.13           420.8770         86.6764         250.1283         10.5987         -0.0349         0.9994         -0.0001         -0.11           424.6399         86.8076         250.1283         15.0346         -0.0349         0.9994         -0.0001         -0.11           425.4261         86.9743         249.2681   | 301 - 0.10382 - 0.20823 - 0.21882<br>304 - 0.17882 - 0.25823 - 0.21102<br>3157 - 0.17382 - 0.25631 - 0.21102<br>3152 - 0.16366 - 0.25385 - 0.20282<br>354 - 0.16317 - 0.25163 - 0.19418<br>3674 - 0.15730 - 0.24920 - 0.18504<br>3676 - 0.15730 - 0.24920 - 0.17545<br>325 - 0.14416 - 0.24343 - 0.16543<br>326 - 0.13663 - 0.233960 - 0.15495<br>370 - 0.12845 - 0.23511 - 0.144433<br>340 - 0.112845 - 0.23511 - 0.144433<br>340 - 0.11952 - 0.22952 - 0.13374<br>366 - 0.09857 - 0.21554 - 0.11356<br>367 - 0.08893 - 0.20802 - 0.10380<br>347 - 0.07886 - 0.20183 - 0.09417<br>347 - 0.07886 - 0.20183 - 0.09417<br>360 - 0.06152 - 0.19883 - 0.07279 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | 167 -0.15098 -0.24647 -0.17545<br>125 -0.14416 -0.24343 -0.16543<br>126 -0.13663 -0.23960 -0.15495<br>170 -0.12845 -0.23511 -0.14433<br>140 -0.11952 -0.22952 -0.13374  |
| 424.6399 86.8076 250.1283 10.5987 -0.0349 0.9994 -0.0001 -0.11 429.4201 86.8076 250.1283 15.0346 -0.0349 0.9994 -0.0001 -0.11 429.4201 86.9743 249.2681 21.2994 -0.0349 0.9994 -0.0001 -0.10 435.4765 87.1856 248.3541 29.8480 -0.0349 0.9994 -0.0001 -0.09 443.0779 87.4506 247.4152 40.9873 -0.0349 0.9994 -0.0001 -0.09 452.4273 87.7771 246.4963 54.4623 -0.0349 0.9994 0.0000 -0.08 453.6375 88.1684 245.6637 69.1753 -0.0349 0.9994 0.0000 -0.07 476.6009 88.6210 244.9963 82.9320 -0.0349 0.9994 0.0000 -0.07 490.9555 89.1223 244.5648 92.8785 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.08   | 1807 - 0.15098 - 0.24547 - 0.17548<br>1225 - 0.14416 - 0.24343 - 0.16543<br>1226 - 0.13663 - 0.233960 - 0.15495<br>1770 - 0.12845 - 0.23511 - 0.14433<br>1840 - 0.11952 - 0.22952 - 0.13374<br>1833 - 0.10983 - 0.22300 - 0.12341<br>1866 - 0.09957 - 0.21554 - 0.11356<br>1770 - 0.08893 - 0.20802 - 0.10380<br>1847 - 0.07886 - 0.20183 - 0.09417<br>1876 - 0.06934 - 0.19775 - 0.08347<br>1860 - 0.06152 - 0.19883 - 0.07279<br>1872 - 0.07828 - 0.20218 - 0.06058   |
| 490.9555 89.1223 244.5648 92.8785 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 506.1061 89.6513 244.4303 96.6592 -0.0349 0.9994 0.0000 -0.07 608 608 608 608 608 608 608 608 608 608  | 022 -0.05328 -0.20218 -0.06058<br>769 -0.05454 -0.21937 -0.05658  |
| 500.1061     89.10818     244.4303     90.0892     -0.0349     0.9994     0.0000     -0.07       521.3346     90.1828     244.9780     62.4589     -0.0349     0.9994     0.0000     -0.17       405.5314     86.1389     256.9188     0.0472     -0.0355     0.9994     -0.0005     -0.17       406.0935     86.1880     256.7503     0.1584     -0.0356     0.9994     -0.0003     -0.16       406.7093     86.1807     256.5698     0.2970     -0.0355     0.9994     -0.0001     -0.15       407.3903     86.2048     256.3794     0.4738     -0.0354     0.9994     -0.0001     -0.15       408.1548     86.2318     256.1784     0.7041     -0.0353     0.9994     -0.0001     -0.15   | 301 -0.0004 -0.26639 -0.08355<br>301 -0.19458 -0.27631 -0.23289<br>302 -0.19459 -0.26567 -0.23289<br>303 -0.19459 -0.26567 -0.23649<br>304 -0.18538 -0.26103 -0.22980<br>305 -0.17963 -0.25764 -0.22092<br>307 -0.17425 -0.257435 -0.21295  |

| 8840885662341251582331330883448511251582333664149111884456661724416823415233656641191118893866234119111889386623412556566910112121558236664119111889386623411911188938662341191118893866234119111181818181818181818181818181818181 | 27776644911483993177751123005401116045471445644288449898788277766649115933914277730118644577312731007447745771511333938888888888888888888888888888888 | 77955564114629995826638419994562682659993968352928528873557674956878248472055078611386078767739428783965113367696938890000099999877788887896411310000000999998777888878964113100000009999999999999999999999999999 | 0.0335500093499999995220033555009999620003344999999996000000000000000000000000   | 0.9994                                  | 0.0002<br>0.0002<br>0.0002<br>0.0002<br>0.0002<br>0.0002<br>0.0001<br>0.0001   | -0.087889 -0.08384 -0.09312 -0.09929 -0.163300 -0.15376 -0.14591 -0.134591 -0.12660 -0.112233 -0.112408 -0.089584 -0.088584 -0.088599   | -0.13407<br>-0.12797<br>-0.12797<br>-0.121518<br>-0.10810<br>-0.10038<br>-0.09167<br>-0.08282<br>-0.07384<br>-0.06690<br>-0.06061  | -0.23598<br>-0.23620<br>-0.23210<br>-0.22800<br>-0.22338<br>-0.21829<br>-0.21249<br>-0.20580<br>-0.19810   | 0116158338867795371795037179503786487866487869389311414543798554995150978954691114141414141414141414141414141414141 |
|--|---|---|--|---|--|---|--|--|---|
| 410.7462<br>412.0503<br>413.6164<br>415.59029<br>420.8771<br>424.6411<br>429.4218<br>433.0734<br>452.4278<br>463.6386  | 86.4231<br>86.4927<br>86.6764<br>86.8077<br>86.9744<br>87.1857<br>87.7771   | 950719376569787677337499566923<br>95071937658978767734765696999997397656982926955788899999997788899999999999999999999   | 2.7861 -U 0350<br>3.8449 -O 0349<br>7.4949 -O 0349<br>10.5934 -O 0349<br>21.2935 -O 0349<br>29.8397 -O 0349<br>24.9752 -O 0349<br>54.4570 -O 0349<br>82.9180 -O 0349<br>82.9180 -O 0349<br>92.8824 -O 0349 | 0.9999944444444444444444444444444444444 | 0.0002<br>0.0001<br>0.0001<br>0.0001<br>0.0001<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.0000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.000000 | -0.13660<br>-0.122233<br>-0.112223<br>-0.1126788<br>-0.195985<br>-0.0883994<br>-0.0883994<br>-0.0883994<br>-0.08829045<br>-0.1258135<br>-0.14439783<br>-0.14439783<br>-0.14439783<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283<br>-0.12283 | -0.13407<br>-0.12797<br>-0.12797<br>-0.112797<br>-0.115810<br>-0.10818<br>-0.10818<br>-0.08188<br>-0.08187<br>-0.066901<br>-0.066901<br>-0.06911<br>-0.1940825<br>-0.17787<br>-0.115595337<br>-0.115595337<br>-0.1129297<br>-0.1129297 | -0.22338<br>-0.21249<br>-0.20580<br>-0.12499<br>-0.18993<br>-0.189437<br>-0.169427<br>-0.173046<br>-0.173046<br>-0.231667<br>-0.261427<br>-0.261428<br>-0.2243144<br>-0.234314<br>-0.233048<br>-0.233048 | -0.1740<br>-0.1648<br>-0.1555<br>-0.1465<br>-0.1379<br>-0.1299  |

| 434.7197                         | 87.1589<br>87.4260 | 269.9642<br>271.3729          | 30.6616 -0.0349                    | 0.9994           | 0.0001 -0.10255                    | -0.10244<br>-0.09387             | -0.18472<br>-0.17585 | -0.11832<br>-0.11085 |
|----------------------------------|--------------------|-------------------------------|------------------------------------|------------------|------------------------------------|----------------------------------|----------------------|----------------------|
| 442.3747<br>451.8145             | 87.4260<br>87.7555 | 271.3729<br>272.7 <b>4</b> 77 | 41.8966 -0.0349<br>55.4547 -0.0349 | 0.9994<br>0.9994 | 0.0001 -0.09692<br>0.0000 -0.09218 | -0.09387                         | -0.17585             | -0.10261             |
| 463.1374                         | 88.1509            | 273 9931                      | 70.2128 -0.0349                    | 0.9994           | 0.0000 -0.08831                    | -0.07614                         | -0.16340             | -0.09278             |
| 476.2347                         | 88.6082            | 273.9931<br>274.9964          | 83.9550 -0.0349                    | 0.9994           | 0.0000 -0.08721                    | -0.06941                         | -0.16445             | -0.08350             |
| 490.7405                         | 89.1148            | 275.6395                      | 93.9094 -0.0349                    | 0.9994           | 0.0000 -0.08689                    | -0.06352                         | -0.16724             | -0.07344             |
| 506.0407                         | 89.6490            | 275.8452<br>275.5797          | 97.5373 -0.0349                    | 0.9994           | 0.0000 -0.09149<br>0.0000 -0.10275 | -0.06298                         | -0.18719             | -0.06806<br>-0.06773 |
| 521.4035                         | 90.1852            | 275.5797<br>275.0354          | 94.2896 -0.0349<br>61.6825 -0.0349 | 0.9994<br>0.9994 | 0.0000 -0.10275<br>0.0000 -0.08491 | -0.06970<br>-0.05694             | -0.21322<br>-0.23955 | -0.05382             |
| 534.1325<br>405.3967             | 90.6296<br>86.1341 | 213.0334                      | 0.0618 -0.0357                     | 0.9994           | 0.0002 -0.17147                    | -0.19734                         | -0.27438             | -0.24167             |
| 405.6904                         | 86.1445            | 257.3239<br>257.9944          | 0.0618 -0.0357<br>0.2079 -0.0356   | 0.9994           | 0.0001 -0.16615                    | -0.19375                         | -0.26584             | -0.24270             |
| 406.0431                         | 86,1569            | 258.7074                      | 0.3890 -0.0354                     | 0.9994           | 0.0001 -0.16130                    | -0.18740                         | -0.26080             | -0.23645             |
| 406.4735                         | 86.1720            | 259.4609                      | 0.6161 -0.0354<br>0.9046 -0.0354   | 0.9994           | 0.0002 -0.15744                    | -0.18108<br>-0.17497             | -0.25575             | -0.22837<br>-0.22028 |
| 407.0026                         | 86.1907            | 260.2578<br>261.1060          | 0.9046 -0.0354<br>1.2603 -0.0352   | 0.9994<br>0.9994 | 0.0002 -0.15356<br>0.0002 -0.14970 | -0.16872                         | -0.25078<br>-0.24593 | -0.21158             |
| 407.6427<br>408.4174             | 86.2131            | 262 0025                      | 1.7139 -0.0352                     | 0.9994           | 0.0002 -0.14585                    | -0.16244                         | -0.24099             | -0.20243             |
| 409.3716                         | 86.2402<br>86.2736 | 262.0025<br>262.9573          | 2.3489 -0.0352                     | 0.9994           | 0.0002 -0.14192                    | -0.15609                         | -0.23610             | -0.19274             |
| 410.5461                         | 86.3147            | 263.9877                      | 3.1629 ~0.0351                     | 0.9994           | 0.0002 -0.13786                    | -0.14970                         | -0.23086             | -0.18270             |
| 411.9991                         | 86.3655            | 265.1003                      | 4.3075 -0.0350<br>5.9139 -0.0350   | 0.9994           | 0.0002 -0.13376<br>0.0002 -0.12938 | -0.14345<br>-0.13717             | -0.22564<br>-0.21978 | -0.17261<br>-0.16249 |
| 413.8197<br>416.1196             | 86.4290<br>86.5093 | 266.3142<br>267.6436          | 5.9139 -0.0350<br>8.1797 -0.0350   | 0.9994           | 0.0002 -0.12491                    | -0.13112                         | -0.21366             | -0.15287             |
| 419.0502                         | 86.6116            | 269.0985                      |                                    | 0.9994           | 0.0002 -0.12016                    | -0.12510                         | -0.20677             | -0.14389             |
| 422.8038                         | 86.7426            | 270.6908                      | 16.0274 -0.0349                    | 0.9994           | 0.0001 -0.11513                    | -0.11899                         | -0.19907             | -0.13585             |
| 427.6148                         | 86.9105            | 272.4176                      | 22.4702 -0.0349                    | 0.9994           | 0.0001 -0.10979                    | -0.11236                         | -0.19038             | -0.12856             |
| 427.6148<br>433.7496<br>441.4796 | 87.1246            | 274.2507                      | 31.2146 -0.0349<br>42.5548 -0.0349 | 0.9994<br>0.9994 | 0.0001 -0.10448                    | -0.10499<br>-0.09644             | -0.18130<br>-0.17191 | -0.12170<br>-0.11417 |
| 451.0289                         | 87.3945<br>87.7279 | 276.1342<br>277.9744          | 56.2458 -0.0349                    | 0.9994           | 0.0000 -0.09506                    | -0.08761                         | -0.16408             | -0.10588             |
| 462.4972                         | 88.1283            | 279.6429                      | 71.1795 -0.0349                    | 0.9994           | 0.0000 -0.09187                    | -0.07885                         | -0.15851             | -0.09629<br>-0.08776 |
| 462.4972<br>475.7744             | 88.1283<br>88.5920 | 279.6429<br>280.9878          | 85.1289 -0.0349                    | 0.9994           | 0.0000 -0.09155                    | -0.07263                         | -0.15910             | -0.08776             |
| 490.4889                         | 89.1060            | 281.8517                      | 95.2640 -0.0349<br>98.8436 -0.0349 | 0.9994           | 0.0000 -0.09230<br>0.0000 -0.09921 | -0.06759<br>-0.06923             | -0.16165<br>-0.18150 | -0.07877<br>-0.07592 |
| 506.0044                         | 89.6478<br>90.1907 | 282.1277<br>281.7696          | 95.4577 -0.0349                    | 0.9994           | 0.0000 -0.11381                    | -0.07818                         | -0.20778             | -0.07708             |
| 521.5632<br>534.2579             | 90.6340            | 281 0444                      | 60.2108 -0.0349                    | 0.9994           | 0.0000 -0.11710                    | -0.08647                         | -0.23176<br>-0.27278 | -0.08295             |
| 405.3229                         | 86.1315            | 257.3783<br>258.1643          | 0.0675 -0.0351                     | 0.9994           | 0.0001 -0.17275                    | -0.19643                         | -0.27278             | -0.23668             |
| 405.4676                         | 86.1365            | 258.1643                      | 0.2248 -0.0354<br>0.4176 -0.0354   | 0.9994           | 0.0000 -0.16809<br>0.0001 -0.16378 | -0.19516<br>-0.19076             | -0.26418<br>-0.25861 | -0.24174<br>-0.23994 |
| 405.6719<br>405.9593             | 86.1437<br>86.1538 | 259.0080<br>259.9097          | 0.4176 -0.0354<br>0.6548 -0.0353   | 0.9994           | 0.0001 -0.16011                    | -0.18522                         | -0.25391             | -0.23433             |
| 406.3521                         | 86.1676            | 260.8734                      | 0.9509 -0.0353                     | 0.9994           | 0.0001 -0.15632                    | -0.17929                         | -0.24888             | -0.22740             |
| 406.8627                         | 86.1854            | 261 9077                      | 1.3219 -0.0352                     | 0.9994           | 0.0002 -0.15243                    | -0.17305                         | -0.24402             | -0.21941             |
| 407.5208                         | 86.2084            | 263.0128                      | 1.7915 -0.0352<br>2.4367 -0.0352   | 0.9994           | 0.0002 -0.14851<br>0.0002 -0.14442 | -0.16660<br>-0.15993             | -0.23907<br>-0.23404 | -0.21049<br>-0.20058 |
| 408.3716<br>409.4536             | 86.2382<br>86.2760 | 264.1997<br>265.4866          | 2.4367 -0.0352<br>3.2730 -0.0352   | 0.9994           | 0.0002 -0.14017                    | -0.15318                         | -0.22863             | -0.19008             |
| 410.8288                         | 86.3240            | 266.8829                      | 4.4431 -0.0351                     | 0.9994           | 0.0002 -0.13591<br>0.0002 -0.13138 | -0.14662                         | -0.22322             | -0.17937             |
| 412.5870                         | 86.3854            | 268.4110                      | 6.0860 -0.0350                     | 0.9994           | 0.0002 -0.13138                    | -0.14011                         | -0.21713             | -0.16858             |
| 414.8422<br>417.7480             | 86.4641            | 270.0881                      | 8.4033 -0.0350                     | 0.9994           | 0.0002 -0.12675                    | -0.13392<br>-0.12795<br>-0.12204 | -0.21072<br>-0.20350 | -0.15830             |
| 417.7480                         | 86.5656<br>86.6966 | 271.9263<br>273.9388          | 11.7087 -0.0350<br>16.4135 -0.0349 | 0.9994           | 0.0002 -0.12192<br>0.0001 -0.11691 | -0.12795                         | -0.19547             | -0.14887<br>-0.14058 |
| 421.4990<br>426.3346             | 86.8654            | 276.1213                      | 22 9944 -0.0349                    | 0.9994           | 0.0001 -0.11166                    | -0.11563                         | -0.18638             | -0.13311             |
| 432.5270                         | 87.0816            | 278. <b>4391</b>              | 31.9220 -0.0349                    | 0.9994           | 0.0001 -0.10651                    | -0.10839                         | -0.17680             | -0.12598             |
| 440.3537                         | 87.3549            | 280.8211                      | 43.4906 -0.0349                    | 0.9994           | 0.0001 -0.10160                    | -0.09985                         | -0.16693             | -0.11810             |
| 450.0435                         | 87.6932            | 283.1493                      | 57.4384 -0.0349<br>72.6288 -0.0349 | 0.9994<br>0.9994 | 0.0001 -0.09774<br>0.0001 -0.09496 | -0.09092<br>-0.08205             | -0.15854<br>-0.15261 | -0.10944<br>-0.09938 |
| 461.6994<br>475.2107             | 88.1002<br>88.5721 | 285.2615<br>286.9646          | 72.6288 -0.0349<br>86.8003 -0.0349 | 0.9994           | 0.0000 -0.09520                    | -0.07580                         | -0:15290             | -0.09909             |
| 490.1962                         | 89.0959            | 288.0598                      | 97.0632 -0.0350                    | 0.9994           | 0.0000 -0.09685                    | -0.07114                         | -0.15610             | -0.08066             |
| 506.0009                         | 89.6477            | 288.4095                      | 100.6786 -0.0348                   | 0.9994           | 0.0000 -0.10701                    | -0.07533                         | -0.17641             | -0.07994             |
| 521.8204                         | 90.1996            | 287.9566                      | 96.9473 -0.0349                    | 0.9994           | 0.0000 -0.12356                    | -0.08520                         | -0.20405             | -0.08225             |
| 534.4435                         | 90.6404            | 287.0508                      | 58.0400 -0.0349                    | 0.9994           | 0.0000 -0.14943                    | -0.10901                         | -0.22896             | -0.10347             |

### plate top lower

|   |  | _   |  | 777                                     | F.7   | CD4   | CDO  | CD3  | CP4  |
|---|--|---|--|---|---|---|--|--|--|
| 4777396335895441559100046632216006224179735155259668510443933481491145888999475443115568571592686218720226686218720236862187202368621872023686218720236862187202368621872023686218720236862187864838666322160603885790236682187864838666322160603885790236682187864838666322160603885790236682187864838666322160603885790236862187864838666322160603885790236682187864838666322160603885790236668218786483866632218669233388939900000000000000000000000000000 | 084402588765116993362509929088432858497311112110079133326408000646466610635999164131111907816168665886598659665277531188664721212131989144699203144185321953442857795511125078474567248118809907158389149791414699207344567914471579474677955112507847579514715287899999999999999999999999999999999999 | 24566276777443682249905559902126034446627775551112883332277775869289805249905556444062775551112222211533322777758692898052499905556448043688844662777555115584457155884457156618883328777755511155844571561888332877775551661888988989905122222222222222222222222222222222222 | AREA 84 84 -0.0034499 -0.0034499 -0.0034499 -0.0034499 -0.003449 - | 580544444444444444444444444444444444444 | 0.0000 | -0.30475<br>-0.29311<br>-0.274918<br>-0.274918<br>-0.26167<br>-0.26167<br>-0.25634<br>-0.21492<br>-0.24092<br>-0.23467<br>-0.22633<br>-0.21518<br>-0.20128<br>-0.20128<br>-0.18201<br>-0.18201<br>-0.09063<br>-0.069063<br>-0.069063<br>-0.069063 | -0.42455<br>-0.411567<br>-0.387888<br>-0.387578<br>-0.362985<br>-0.345766<br>-0.3292546<br>-0.2258644<br>-0.225864<br>-0.216515<br>-0.1037044<br>-0.1037044<br>-0.078233<br>-0.078233<br>-0.078233 | 3481491998476283315773186419448494948489193285994914414919948491969224594949494949494996922459494949499692245949494949969224594949499692245949494949969224594949494949494949494949494949494949 | -0.31917<br>-0.30349<br>-0.28600<br>-0.26194<br>-0.23029<br>-0.15329<br>-0.12148 |

| 13621190444885533965886560798872894833575333970919481496853667719824668007181150359711119844943313447977779487121821 074335605530444558396586560798872324668233333333333333333333333333333333 | 2816099386063115040826117434149670850449115577885451105547608977298344405666999014863892299834440566699901486638992891103118044390588999007117228344287712838999007117283899999999999999999999999999999999999 | 971815993462199934621999999977654403583776618813776636557233199252618557232222222222222222222222222222222222 | 196.6787 -0.03349<br>196.76787 -0.03349<br>196.76788 -0.03349<br>19.59788 -0.03349<br>11.59788 -0 | 84344444444444444444444444444444444444 | 0.0000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.00000<br>0.000000 | -0.407309199 -0.40730919991919709919191919191919191919191919 | 789655 | 7287-7406612448222417-607-740339-9844687-7287-7287-7287-7287-7287-7287-7287-7 | 401509900640935590700466278895831372253338447042587666399864439923934661129970011185222409940922888375669211466198865038414744669951574466439865547546683344746611988655475466833447466119886554754688334473339406458665547546683494866119886554754688334473339466119866554754668349486611988655475466834948661198865547546683494866119886554754667647647676767676767676767676767 |
|---|---|--|--|--|--|--|--------|---|---|

| 666557944398055094241624741624088754463767079685579463980123666685579433980550942408355720661839875400875586587994339805509424408357720661838442670795857585153851538528760841835772066183844240123509669324401355287638856939999011366988383779558583773850333399799857598575858377385033333997998575858377385033333997998575858577885033333333333333333333333333   | 92921154875129774497580331146911998811927061153907837852581409227355748283111291186422116005060229608172380744890047113709100101890834427702268449758891186228786219213468938592335600915881600000385257873136462221600506022960918335627979999999999999999999999999999999999 | 111448000589318920261185060346408076600447881622737555170075982389973738800626443998713368850848494949494949494949494949494949494949   | 4.0.0344999770003449997700034499934999349993  | 44444444444444444444444444444444444444  |  | -0.06911  | 389989990111034833112329399999121034831384833135505059121121373331343120212121213733134405131212121212121212121212121212121212121 | -0.30459<br>-0.303812<br>-0.301055<br>-0.301055<br>-0.29853<br>-0.2996439<br>-0.28709<br>-0.28709<br>-0.288049<br>-0.288049<br>-0.289649<br>-0.289649<br>-0.289649<br>-0.289649<br>-0.289649<br>-0.289649<br>-0.30566<br>-0.315966<br>-0.315966<br>-0.315966 | -0.65516<br>-0.49842<br>-0.36719<br>-0.32620<br>-0.30727<br>-0.30351 |
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| 409 55492<br>411 1 51925<br>411 1 16192<br>411 1 1 | 92211609219160921919221916091919221916091919091909190919091909190919091909  | 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|--|--|--|---|--|--|---|--|---|--|
| 431.6144<br>439.4891<br>449.2307   | 87.0495<br>87.3245<br>87.6647  | 232.1764<br>229.5380<br>226.9615   | 19.6123 -0.0349<br>24.3025 -0.0349  | 0.9994<br>0.9994<br>0.9994             | 0.0000   | -0.10704<br>-0.09505<br>-0.08415  | -0.11975<br>-0.10218<br>-0.08690   | -0.25540<br>-0.25318  | -0.13513<br>-0.11755<br>-0.10198   |